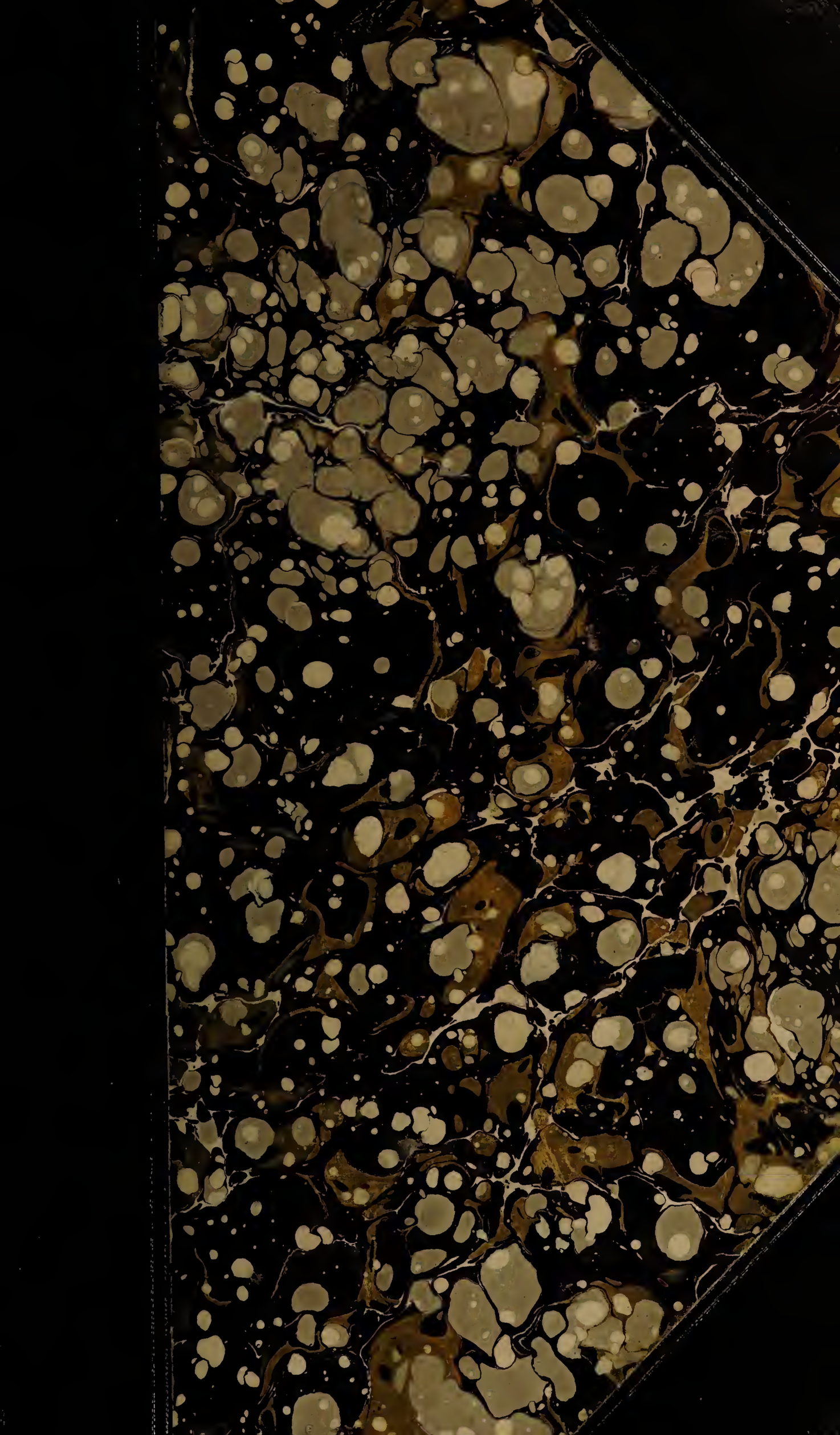

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AND OF THE

SCIENCES CONNECTED WITH THEM;

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Foreign Review.

M. GEORGET'S PHYSIOLOGY AND TREATMENT OF NERVOUS DISEASES.*

What has metaphysics to do with medicine? A science which Dr. Armstrong,—we mean the poet,—has characterised as "the art of talking grave nonsense, upon the subjects beyond the reach of the human understanding." But of metaphysics we must speak; for we could not fulfil our duty to our readers, were we not sometimes to advert to these subjects, however unfitable they may be, since they have of late become favorite topics of discussion among some of the leading men in the pro-profession. When such men, indeed, as Abernethy, and Home, and Lawrence, and Bell, and Barclay, in this country; and Soemmerring, Hufeland, Blumenbach, Cabanis, Cuvier, and Richerand, on the Continent, turn their attention to the metaphysics of physiology, we cannot—we dare not, pass them by without notice. Nay, we are of opinion, that Dr. Armstrong's severe sarcasm may, in some future day, become quite inapplicable; and that the mysterious jargon, which is still so often met with in metaphysical physiology, will give place to a clear

* De la Physiologie du Systeme Nerveux, et specialement du Cerveau. Recherches sur les Maladies Nerveuses en general, et en particulier sur le siege, la nature et le traitement de l'Hysterie, de la Hypochondrie, de l'Epilepsie et de l'Asthme convulsif. Par M. Georget, Docteur en Médécine de la Faculté de Paris, &c. Vol. II. Paris, 1821.

and practical simplicity, and we shall do our best to aid this consummation. But we must now turn to M. Georget, who, although he commences metaphysically, soon goes on to be practical, and in this course we shall closely follow him.

He prefaces the consideration of the functions of the nervous system by some preliminary notions on the study of PHYSIOLOGY in general. He is one of those who, proceeding in the path of observation, and unwilling to admit the existence of causes without adequate proofs, rejects all those explanations of the phenomena of life, that refer them to the influence of an abstract, occult principle, which has received various denominations from those who resorted to its assistance to explain the difficulties we meet at every step we take in the field of physiology. In a word, M. Georget is a disciple of materialism, and expressly states, that life is but the exercise of the functions of the organs, that is, organization in action. Each organ, he says, has its own life, and the union of these special lives, or actions, constitutes the general life of the being. This is almost a translation of Dr. Darwin's account of vegetable life, which asserts every bud to be a perfect plant, while the aggregation of buds is *the plant!* The great argument in favor of spiritualism he draws from the singular nature of all, or a part of the vital phenomena. A corpse, it is said, has this moment ceased to breathe; it is asked, what have its organs lost, to account for so great a change? But first, shew by what property the particles of a salt arrange themselves so as to crystallize; try to explain the effects of electricity, of caloric, of the loadstone, and then you will probably open the way to discoveries relative to the motions, the life of vegetables, and by an insensible gradation from the inferior animals to man. You defy me to make matter think; I defy you to make it digest, secrete, bud, crystallize. I will tell you, with Locke, that it is not more difficult to conceive the faculty of thinking given to matter, than to an immaterial principle: I will go farther, by saying it is less difficult, for I can conceive that something may be capable of something, while I cannot conceive that nothing should produce something.—This is a mere echo of Diderot, and Mirabeau, and Bichat. We confess candidly, that we cannot comprehend it. But this may be from our own dullness:—such things do happen.

Perhaps the most extraordinary part of the first division of M. Georget's work, is the history of some facts relating to MAGNETIC SOMNAMBULISM, which have fallen under his own observation; and which, while too well attested to admit altogether of doubt, present a series of phenomena totally inexplicable in the present state of our knowledge. We are aware that to many,

the subject may appear too ridiculous to deserve a serious consideration, and that the person who mentions it in any other terms than those of contempt and reproach, incurs no small risk of being treated as an impostor, or a dupe. To the prejudiced, it is in vain perhaps to offer either arguments or facts; but to those who are not unwilling to open their eyes to the truth, although it should be in opposition to pre-conceived ideas, we cannot do better than follow the example of the author, in presenting some undisputed facts, equally extraordinary and inexplicable with those of animal magnetism. To give an instance; it has been observed, that if a person dreaming aloud be brought into contact with another individual without being awakened, the dreamer may be made to converse on all possible subjects; on those most interesting to him; those which he most desires to keep secret; and shall remember nothing that has occurred when he awakes. We have heard M. Richerand relate similar facts, and explain them by supposing, that in such cases a single sense remains open to impressions. He gave such cases as proofs of the errors to which the senses are liable, and the necessity there is for their reciprocal correction. But to this explanation M. Georget objects, that so long as you are isolated from the somnambulist, it is in vain to attempt to make him converse, and that instead of answering, he is more likely to be awakened.

The examples are not uncommon of natural somnambulists, who in this state have made mental exertions as perfect, or even more so than when awake. Every one knows Haller's account of the school-boy, who rose in the night, seated himself, took his task, and corrected it in a remarkable manner, without making any fault, although his eyes were inactive, as was proved by the interposition of an opaque body between them and the paper, not hindering the exactness of the correction.

All the magnetic phenomena, of which M. Georget gives an account, may be ranged under three heads:—1. Sensorial; 2. Intellectual and Moral; 3. Muscular Phenomena.

The SENSORIAL power presents very different phenomena in its different dependencies. Two senses, those of sight and hearing, are commonly suspended; and are insensible to light and sound, except under certain conditions. The senses of taste and smell present nothing contrary to their natural state; that of touch is in many respects unchanged, in others, much increased; whilst the extremities of the internal nerves transmit the usual sensations to the brain.

My SOMNAMBULISTS, says the author, have had the sense of hearing so inactive, that the loudest and most sudden noise has caused no emotion; a pistol shot, a loud bell, has not prevented

them from continuing a conversation in the same tone; but as soon as any person is brought into relation (*mis en rapport*) with them, the isolation ceases, and the person who touches can be very well heard by them. But the magnetizer is always understood, although he is not immediately in relation; his voice is even heard more readily than out of the state of somnambulism. The globe of the eye is turned upwards, fixed, and incapable of motion; the eyelids are closed, and as it were convulsed; the upper one cannot be raised by the exercise of the will. In one case the organ was insensible to light; in another, the person was sufficiently to walk, but not to read or write.

With respect to the sense of TOUCH, the somnambulists retained the faculty as in the waking state; but besides this, the sense acquired a peculiar exaltation, so that the subjects perceived impressions, and new objects, which they could not have perceived or known in other circumstances. Thus, they in general knew on the first contact, and without examination, the difference of the persons who touched them; took their hand; or put but a finger on some part of their body. More than this, they sometimes felt the presence and even mentioned the name, when they happened to know it, of persons who had entered without making the least noise, after the sense of hearing was suspended. On asking an explanation of these two sensations, one with, and the other without contact, all have said, "It is not by the physical properties of the hand that we recognize individuals, but all at once we are struck with a presentiment—we are seized with the idea that it is such or such an one, or that some person is present." In connection with this part of the subject, the author quotes a case mentioned to him by M. Esquirol, whose character and abilities place him above suspicion. A lady, troubled with vapours in the extreme, and for that reason secluded from her family, presented a phenomenon of this nature. As soon as her husband, who was no longer allowed to see her, entered the first chamber of the suite of apartments which she occupied, she had immediately a presentiment of his approach.

The somnambulists appear to SYMPATHIZE in an extraordinary manner with the sick who are brought into relation with them. One day, three somnambulists were in the same room, one of them at the foot of the bed and hysterical, had violent pains in the head and stomach; the second was well; and the third, at the side of the bed, was taking a foot-bath. The second goes to speak to the first, touches her, and is immediately seized with an attack; "while I," says M. Georget, "am helping to hold this one, the third wishing to take her feet out of the mustard

water, I place one of my hands on her knees to keep them there; she immediately feels a violent commotion, which she compares to the shock from a powerful discharge of electricity, and has a violent attack."

Some somnambulists have been mentioned as having seen the interior of their bodies; perceived, and described the natural and morbid disposition of their organs. On this subject, M. Georget mentions one of his subjects, affected with an inflammation of the left lung, who said that she saw, as if with her eyes, her thoracic organs. In fact, she gave a very remarkable description of them; the heart was surrounded by a membrane which did not adhere to it, and received seven vessels, of which the two largest were agitated by a peculiar motion. The inflamed lung was very red, and resembled liver in many points. As the affection of the lung declined, this person perceived less, and in the end saw nothing. Being interrogated in her ordinary state on these facts, and on the knowledge she might previously have had, she plainly shewed that she was entirely ignorant.—All this appears to us so very extraordinary, so much like raving, that we are inclined to suppose, M. Georget to have been grossly duped. We have not forgot the case of Miss M'Avoy of Liverpool; the French, we suppose, have no specific preventive against being gulled more than ourselves. We insinuate nothing against the known honour of M. Georget. As to their intellectual and moral phenomena, somnambulists are generally full of vanity and self-love with respect to their new state; and very susceptible and indiscreet. Hence our author tells us, that to know the truth, much art is necessary in questioning them, particularly on subjects relating to their perfection as somnambulists. The magnetizer has great influence over the magnetized. He may by tormenting him, force the latter to avowals which he would not have made under other circumstances. It must not however be supposed, that in this respect the somnambulist has no liberty, no power of resistance. Besides their ordinary intellectual powers, the somnambulists have these in addition:—1. They remember every thing that has passed during the state of somnambulism at every past period; a rememberance that they lose with the cessation of this state: this, indeed, is an essential character of it; for dreams, and acts of madness and delirium are remembered, but here, after the state of somnambulism, there are no traces left; the individuals awake as though from a lethargy, and think, in fact, they have been in a sound sleep. 2. All pretend to know their situation, and if they are ill, order the remedies they think necessary. The somnambulists of M. Georget never ordered any other remedies, than those they saw daily em-

ployed, and never indicated any which they had not heard mentioned. "It was curious enough," says he, "to see them protest vehemently against the execution of their own prescriptions, when these happened to be the application of moxas and blisters. Notwithstanding this, one of them ordered for herself, and had applied, eighteen or twenty moxas, several setons and issues, and a great number of blisters in less than eighteen months." 3. The most singular phenomena relate to the foresight of the actions of the system, at more or less distant periods. "I have positively," says the author, "seen the somnambulists announce, and that repeatedly, several, even twenty days before hand, the hour, nay the minute of the invasion of epileptic and hysteric fits; the appearance of the menses; and indicate the duration, and the intensity of these attacks: things which have been exactly verified."

In general the MUSCULAR SYSTEM participates in the excitation of the cerebral faculties. But in certain cases an entire cessation of the muscular functions, and an incapability of motion either general or partial is the consequence. M. Georget has so often seen and produced this phenomenon, that he considers it one of the most certain he has observed. The part operated on, is affected with a sensation of coldness, pricking, numbness, followed by stiffness and the loss of motion and feeling. "As I doubted," says he, "whether the muscles of inspiration could be paralysed thus, seeing them as it were beyond the cerebral influence, I one day made the experiment: I produced such an immobility of the thorax, and such imminent danger of suffocation, that I was much alarmed, and resolved to avoid such experiments in future."

It only remains for us to say a few words on the MEANS prescribed for the production of this extraordinary state:—1. An indispensable condition is the concurrence of two persons, the one acting, the other acted on. The somnambulists observed by M. Georget were females, from twenty-five to thirty years, affected with hysteria and epilepsy; in these cases the influencing persons were male; the influenced female! But the subjects of his observations (females) influenced each other reciprocally, and he has seen other women produce the same effects on others of their own sex. 2. It is necessary that the two individuals direct the cerebral action as powerfully and as exclusively as possible to the production of these phenomena, that they *intend* and *will* the occurrence of the somnambulism. "Whenever (we quote M. Georget) I was distracted, occupied with other things, and inattentive to what I had undertaken, I was incapable of producing any phenomenon; when I thought the operation at

an end, the somnambulist said, that she perceived nothing, and yet, I alone could judge of the state of my own mind." The will seems to be of less consequence on the part of the persons influenced, for M. Georget has produced somnambulism against their will, or without their knowledge, as during an attack of epilepsy or hysteria. 3. Besides the direction of the interior action of the brain, the hands are commonly applied to the head, or to the parts to be influenced, either to produce or to remove the phenomena of somnambulism. This is not, however, absolutely necessary, for the magnetic influence may be exercised at a distance of several feet, even where the two individuals are separated by a screen or a door, and when the magnetized is unconscious of what is doing. The duration of the somnambulism is regulated by the will of the parties. The magnetizer may put an end to it in spite of the magnetized. The latter cannot stop it by his will alone; and in the end he recovers the ordinary exercise of his faculties. M. Georget allowed the state of somnambulism to remain several hours one day, and in one case seven days, without any injurious consequences. During this state the brain never sleeps, the somnambulist always wakes. When the subject has regained the natural exercise of his cerebral faculties, he feels surprised, rubs his eyes, stretches his limbs, and complains of head-ache. What is very remarkable, the somnambulist recollects nothing that has passed, has not even an idea of the duration of his new state. He thinks on quitting it, that he is at the same point of time as when he entered it.

We do not think it necessary to make any apology for the extent to which we have carried this abstract of the history which M. Georget has given of the phenomena of this extraordinary state. We are ready to confess, that the evidence he has adduced in favour of the truth of these occurrences has made a strong impression upon us. We do not, nor does he think it necessary to put faith in all the absurd reveries of the professors of animal magnetism; but with the facts that he has laid before us, we do not think it too much to say, that the subject deserves further investigation and consideration. Every body is convinced of the power of galvanism and electricity on the system, because it cannot be denied; and may not, we ask, the late discoveries of Professor Oersted, with regard to the connection of magnetism and electricity, afford evidence that there may be something more in animal magnetism than theory and conjecture? There are many, no doubt, who may think it a much shorter and better method to get rid of the question at once, by denying the authenticity of the facts, and the good faith of those who relate them.

It is unnecessary to observe, that such a mode of proceeding is neither satifactory nor decisive; and that if the phenomena be false or incorrectly observed, it can be no very difficult task to disprove them in the one case, or to point out the source of error in the other. Until this be done we must claim the right to suspend our opinion, and question the authority of those who pass the subject over without examination. It is but justice to M. Georget to say, that the candour of his remarks, the place of his observations, (La Salpêtriére,) and the quotations he has given from his published writings at different times, show his own conviction of the truth of what he relates, and that if he has been led into error, it has been unconsciously, and with the best intentions.

We proceed to the consideration of our author's researches on NERVOUS DISEASES, and we cannot but be pleased with the discernment and correctness with which he considers this part of pathology. The object which M. Georget proposes to himself, is to prove the cerebral origin of hysteria, hypochondriasis, epilepsy, and spasmodic asthma, and to detail and account for the various sympathetic affections occasioned by disease.

His opportunities at La Salpêtriére (the receptacle for the insane, epileptics and infirm in Paris), have enabled him to speak with some confidence on the nature of the diseases of which he treats, and have produced in his mind the firm conviction that they are in their nature uniformly nervous; and that the symptoms of disorder in the functions of other organs, which have so frequently been mistaken for their causes, should rather be considered as their effects, and as the sympathies of the organs so affected with the nervous system. Among the CAUSES of these disorders, he insists particularly upon the *nimia Venus;* which every body knows to prevail so much among youth—though it is in this country thought to savour of empiricism, even to hint at the indulgence.

As far as regards one of these diseases, at least—we mean EPILEPSY—we think it quite unnecessary to adduce any arguments to prove this fact. We believe that there are very few in this country who feel inclined to deny the nervous origin of the disease in question. We think that a consideration of its symptoms would authorize us in classing it among diseases purely cerebral, in opposition to the opinion of those who believe that is the result of disorder or disease in the spinal marrow. We can readily conceive that any disorder of this part may be a remote or an exciting cause of that state of the brain, which produces the epileptic attack, or what is perhaps more probable, that they may be simultaneous effects

of some one cause; but we can by no means understand how any affection of the spinal cord should produce the symptoms of epilepsy. Convulsions, it is true, may be the consequence of such an affection, but not the insensibility to sensorial impressions, which constantly attends the attacks of this disease, and which, if it be granted that the brain is the seat of the sensorial power, can only be dependent on some affection of that organ.

If it be proved, or allowed, that epilepsy is a nervous disease, and that most probably the brain is the organ in the affections of which it originates, it becomes, we think, almost a necessary conclusion, that hysteria is similarly circumstanced. It is a fact which has been noticed by almost every author who has written on the history of these two diseases, that the differences which exist between them are rather in degree than in their nature. It is no doubt easy to discriminate the extreme cases of each, but, on the other hand, they run into each other by such insensible gradations, that it becomes frequently impossible to determine under which of the two an individual case should be arranged. Fortunately it is not of material importance in the treatment. M. Georget adds his testimony on this point to that of those who have preceded him:—"The governesses," he says, "at La Salpêtriére attach much importance to the following symptoms, as characteristic of epilesy, namely, the absence of precursory symptoms, the total loss of sense, the distortion of the mouth and the rotation of the eyes."

We cannot resist the temptation of transcribing the following anecdote, as a proof of the mistaken views of the origin of HYSTERIA entertained in France, at a very recent period. Dr, Bardin, physician to the hospital of Sens, had inserted in his inaugural dissertation (1821). a proposition, stating his conviction from the observations he had made while an "interne," at Salpêtriére, that the brain was the idiopathic and essential seat of hysteria. Professor Fouquier, the president, having assured this gentleman, that the proposition was untenable, and might even injure him in the eyes of his colleagues, requested him to suppress it, which he at once did, not judging it prudent to engage in a conflict where the contending parties are always unequally matched.

But of all nervous diseases HYPOCHONDRIASIS is doubtless that with regard to the seat and causes of which the greatest misconceptions have prevailed. From the black bile of Hippocrates and Galen, down to the disordered digestive organs of our own days, the writings of medical authors abound with erroneous ideas and misconceptions on the subject. The affections

of the abdominal viscera with which this disease is complicated, in the greater number of cases, have been too often treated of, as standing in the relation of causes, while in reality they should be arranged among its occasional symptoms. That such is really the case, is clearly proved by a consideration of the exciting causes of the disease, which are exclusively moral, or in other words, operate upon the system through the medium of the brain. These are the depressing passions, fear, grief, and despondency; habits of indolence succeeding to a life of industry; long continued and excessive exertions of the intellectual faculties. It is strange, that the supposed influence of the abdominal viscera in the production of hypocondriasis should ever have been entertained, when we consider that it is not unfrequently met with in its severest forms, without any derangement in the functions of those organs, and that its degree bears no direct ratio to the extent of such derangement when present. While we deny the influence of these disorders in the production of the disease, we are not disposed to dispute the influence, which through its effects they in their turn exert over it; but we think that the importance of the indication drawn from hence, in the cure of the disease, has been much overrated, and that the correction of the gastric, and other disorders, becomes of consequence, rather from being within the influence of our curative measures, than from any other circumstance.

There is another fact of some importance in connection with this view of the subject; it is, that the sympathetic derangements consequent on hypochondriasis are not confined to the abdominal organs. Nothing is more common than to meet in such cases, with palpitations of the heart, chronic coughs, and difficulty of respiration, and it would be difficult to shew any good reason, why these are not equally entitled with the first, to be considered in the relation of causes rather than effects.

The last of the nervous diseases to which M. Georget has extended his researches is spasmodic, or as he calls it CONVULSIVE ASTHMA. He is of opinion, that in this, as in other diseases which we have mentioned, the cause is to be met with only in the nervous system. He thinks that its essential character consists in the convulsive, or to use his own language, the almost tetanic action of the muscles of inspiration. We shall take an opportunity to state our objections to this idea, and to mention some facts which appear to us totally irreconcileable with it.

The researches of M. Rostan who has much distinguished himself by his pathological labours, had given considerable strength to the supposition, that it was uniformly connected

with, and indeed the consequence of lesions of the heart and great vessels. M. Georget had taken some pains to refute this doctrine, and we think with perfect success. M. Laennec indeed in his work, " De l'Auscultation mediate,*" had expressed his conviction that the phenomena of spasmodic asthma could not be explained by any of the known affections of the heart or lungs; for that on the one hand the most intense peripneumonies, the hepatization or almost total destruction of the lungs, the largest aneurisms, never cause a degree of dyspnœa comparable to that of an attack of asthma; and on the other hand, in this latter disease, when uncomplicated, all our investigations discover nothing in the organs.

It must be allowed that a considerable degree of obscurity hangs over the nature and causes of this disease, which can only be removed by attentive observation, and the united endeavours of many. We perfectly coincide with M. Georget in the opinion he has expressed, of the errors likely to arise from the attempt to explain all the disorders observed during life, by the organic changes discovered after death. We are far from intending to depreciate or underrate the advantages arising from the attentive study of pathological anatomy, but we feel assured that the indications to be drawn from it are inferior in value and correctness to those derived from philosophical experience and correct observation.

It seems to us, that M. Georget has been led into error with regard to the cause of asthma, by a mistaken view of what he considers the essential character of the disease; the convulsive action of the inspiratory muscles. From the term tetanic which he employs in speaking of this symptom, it is evident that he considers the impediment to respiration, which certainly exists somewhere, to be confined to them. But in doing so, he assumes as a fact what we conceive to be very questionable. Were we to trust to our senses, we should say, that as far as the mechanical powers are concerned, respiration is never more perfectly performed than during the attacks of this disease; every effort is made, every muscle that operates on the thorax, directly or indirectly, is put into a state of convulsive action, to attain one object, namely, the enlargement of that cavity; nor are these efforts fruitless; for, as it seems to us, this enlargement is actually effected, and that in an eminent degree. It is true, that the

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* For a review of Laennec's work see Quarterly Journal of Foreign Medicine, Vol. II. p. 51. A translation of the work, but somewhat curtailed, has just been published by Dr. Forbes of Penzance; but here, its day, we understand, has gone by.

patient experiences no material relief from the exertion he feels compelled to make; and this admission strengthens the argument, by showing that we must look elsewhere for the causes producing the disease. If we be asked where, after rejecting the explanation of our author, the disease really is seated, we should say with Dr. Parry that it is produced by a state of vascular turgescence of the mucous membrane lining the bronchial cells. It is needless to mention how accurately the commencement of an attack, with symptoms of coryza, and its termination, by mucous or even bloody expectoration, coincide as Dr. Parry has shewn with the explanation which he has given of the mode of its production.

In answer to the objections drawn from the absence of organic changes in some asthmatic patients, we may state, that to authorize any positive conclusions on this point, in a periodical disease, such as asthma, we should be presented with the results of examinations made in those cases in which death has taken place while the patient was suffering from the attack. In such instances, which are not very commonly met with (for asthma is rarely immediately fatal), we do not hesitate to assert that the morbid phenomena met with will always be fully adequate to explain the unfortunate termination. We do not know that medical practitioners in general are aware of the extreme rapidity with which death takes place in some cases of asthma. We have seen individuals, apparently in good health previous to the attack, perish in four or six hours, literally from suffocation, in part produced by the gorged state of the bronchial membrane, and partly by the excessive quantities of sero-mucous secretions from it; as proved by examination after death. In these instances the lungs though filled with blood, crepitate, contrary to what takes place after inflammation, or other organic changes. The operation of mental causes in the production of asthma, by no means militates against the explanation we have given of its phenomena; for the same influence is exerted over the affections of other organs, the idiopathic nature of which no one thinks of disputing. Whatever theory we adopt of the origin of asthma, must be equally adverse to the idea of its dependence on lesions of the heart; though that which we have chosen certainly accounts in the most rational manner for their frequent connection, and the manner in which the one attends upon the other.

In the TREATMENT of this disease, the author, in conformity to his pathology, directs his attention to the head, advising leeches and cold lotions to the temples, together with laxatives and bathing the feet. He likewise advises moxa and blisters to

the temples, the neck, or the chest. His general treatment, indeed, of the whole class of diseases consists in *cooling* the head by refrigerents and topical blood letting; and he seems to have little relish for the blue-pill practice. Our readers will find it adviseable, perhaps, to hold a middle course: Medio tutissimi ibunt.

On Vomiting and Emetics, by M.M. Piedagnel and Magendie.*

Experiment is the most direct road to improvement; and experimental physiology, as it often leads to practical results of the highest utility, deserves more attention from the profession than, we fear, it usually obtains. It was this which raised so high the name of Hunter—and it is this which, at present, is the chief basis of the fame of several living ornaments of the profession. On the Continent, researches of this kind have been lately pursued with much ardour; and we promise always to avail ourselves of whatever, in such researches, is novel and useful. We begin with a subject of much interest.

The manner in which vomiting is effected, has for some years past been a favourite subject of controversy in the French school of physiology. Memoirs, and counter-memoirs have appeared almost without end, and experiments have been multiplied in support of the different modes which have been suggested of accounting for this phenomenon. M. Magendie has been one of the principal performers in this dispute, and appears to have been as successful in this instance as in most of his experimental investigations into the laws of the animal economy. While we allow him the credit to which he is fairly entitled, as being the first among his countrymen to discover and point out the true efficient causes of this function, it cannot but be a matter of surprise, and indeed of regret, as regards the unnecessary performance of painful experiments on animals, that he should have been unacquainted (as we suppose he must) with the results of the labours of English physiologists on the same subjects; we allude more particularly to the experiments and observations

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* Memoire sur le Vomissement, par M. Piedagnel, Eléve interne aux hospitaux civils de Paris. (Journal de Physiologie Experimentale, par M. Magendie, Juillet, 1821.)

published by Dr. Haighton in the Memoirs of the London Medical Society, so long back as the year 1788. We will not do M. Magendie the injustice to imagine for a moment, that he would have promulgated his own explanation of the facts as original, had he been aware of the existence of experiments and conclusions so nearly resembling his. We shall now return to the point from which our anxiety to establish the just claims of our countryman had induced us to digress.

It may not be altogether useless, before we proceed to the consideration of M. Piedagnel's Memoir, to mention that the disputed point is, whether the stomach itself does or does not contribute to the evacuation of its contents. M. Magendie and his followers, among whom is M. Piedagnel, are of opinion, that in vomiting the stomach is perfectly passive, and that the performance of this function is to be attributed to the combined action of the diaphragm and abdominal muscles. On the other hand, Haller, with most of the older physiologists, M.M. Maingault and Bourdon, while they admit the powerful agency of the diaphragm and abdominal muscles, attribute to the stomach itself a considerable share of the contraction which produces the evacuation of its contents. The latter gentleman (M. Bourdon, like M. Piedagnel, a house pupil of the hospitals of Paris) in a Memoir lately published, adduced some arguments in support of the opinion he entertained, and which he conceived fatal to the theory of M. Magendie, from the circumstance of having observed a case of cancer in the stomach, in the course of which no vomiting had occurred. To our minds, it needs but little consideration to discover how inadequate a single, unsupported case, which had at most the weight of negative evidence only, was to form the ground of a decision on a disputed point. But unimportant as it really was, it still formed an objection to the unreserved adoption of M. Magendie's theory; and it became necessary for the support of this, that it should receive a satisfactory refutation. Such is the task which M. Piedagnel has undertaken, and we do not hesitate to say, that he has performed it in a manner that is honourable to his own abilities, and likely to set the point at rest for the future.

As the long agitated question of the contraction or non-contraction of the stomach in vomiting had been renewed, he first proceeded to inquire into the condition of the organ at the moment of the occurrence of that phenomenon. M. Magendie, in his Memoir on Vomiting, had established the fact, that if the stomach of an animal be exposed at the time of vomiting, this organ, during the first efforts, so far from contracting, is seen to become distended in the air; if the organ be drawn out of the

abdomen, the animal makes the last effort, (which, in the natural state, is followed by the expulsion of the contents of the stomach,) and yet no vomiting occurs; if the stomach then returned into the abdomen, its contents are at once rejected. These occurrences are uniform, but several authors have stated that they have seen the stomach contract during the time of vomiting. What, then, it may be asked, is the nature of this contraction?

The stomach, according to M. Piedagnel, is susceptible of three kinds of contraction. The first is that which takes place when having been distended, it contracts itself in proportion as its contents are evacuated. This is weak, slow, and gradual, and is only rendered perceptible by the diminution of the size of the organ. The second is that which it possesses in common with the rest of the intestinal canal; it is the peristaltic motion. This movement, which is most observable at the conclusion of digestion, is much more marked in the pyloric than the cardiac part of the stomach; it occurs sometimes from below upwards, at others, from above downwards: it is commonly very inconsiderable, and very slow. Once only, M. Piedagnel saw it so strong in a dog, that he waited to see if the animal would vomit; as this was not the case, after some time, he killed the animal, and found that the contraction continued after death; it was even so far increased, that the parietes of the stomach seemed to be in contact, and the right extremity of the organ was reduced to the size of a finger.

The third species of contraction which the stomach presents, is also very slow. It is in fact not a vital contraction, but a chemical phenomenon; it occurs when sublimate mineral acids, &c. are placed in this organ or upon its surface; the part in contact with these substances mortifies, and a contraction occurs, the effects of which are visible for the space of an inch round the eschar; towards which the other parts of the stomach are drawn. Such are the only kinds of contraction which M. Piedagnel, by the utmost attention, has been able to observe, and none of these appear to him capable of producing vomiting.

Having settled this point, the next thing was to inquire whether vomiting could take place without the stomach, and M. Magendie's experiment naturally presents itself, which consists in putting a pig's bladder in the place of a dog's stomach, and then making the animal vomit. This experiment, it must be allowed, is very conclusive, but M. Bourdon had started an objection to it from the circumstance, that the factitious stomach is not always completely emptied. He asserted, that a third of the

liquid remained in the bladder, and concluded from this fact, that, in natural vomiting, the stomach, by its own contraction, expelled a third part of its contents. M. Piedagnel, on the other hand, after having indulged in a little criticism on the attempt at precision, in this estimate, of the separate action of each organ, affirms, that in some cases, the false stomach is completely emptied, and that by means of some precautions this result may be certainly attained. Reflecting on what takes place in the experiment of the bladder, he conceived that the occasional retention of a part of the liquid during vomiting, might depend on the position of the bag, with respect to the tube through which its contents should escape, a mechanical obstacle being thus presented to its evacuation. This idea was farther confirmed by an experiment which M. Magendie communicated to the author, and made publicly this year, in the course of his lectures on experimental physiology.

The stomach of a living dog was removed, and that of a dead one substituted for it. The last was then filled with a coloured fluid, and placed in the abdomen; the wound in the belly was closed, and the dog made to vomit by means of an emetic injected into the veins. The vomiting was several times repeated, the animal was then killed, and, when opened, the stomach was found completely empty.

From this experiment, M. Piedagnel concluded that his opinion, as to the cause of the obstacle to the rejection of the whole of the contents of the bladder was correct, and that by giving it another shape he could at pleasure secure its total evacuation by vomiting. For this purpose, he made, on a stout dog, two incisions in the linea alba, one at its upper part, the other a little above the pubes. By means of a bougie, introduced through the upper opening, he placed a piece of the colon of a large dog, in the abdomen of the subject of the experiment, one end passing out at the upper; the other at the lower extremity. The stomach was then removed, and the upper end of the intestine fixed to the œsophagus, by means of a wooden canula; the upper opening was then sewed up, a part of coloured fluid injected into the intestine, by the extremity corresponding to the pubes, and a ligature made on that extremity. In this experiment there was a sort of stomach, extending from the œsophagus to the pubes, and which could not change its position, from being fixed at the latter point. The animal was made to vomit by the introduction of an emetic into the veins; the vomiting was several times repeated, and when the subject of the experiment was opened, the false stomach was found completely empty.

From what we have just said it will be seen, that the experiment from which M. Bourdon draws his inferences, is far from being favourable to the theory he adopts. M. Piedagnel proceeds to inquire whether his pathological facts are of more value. He quotes from M. Bourdon's Memoir, the observation of a case of cancer of the stomach, in which no vomiting took place, and contrasts it with several others, in which vomiting was present to the last, although the stomach had long been incapable of contraction. Besides the importance which these discussions attach to the cases in question, they are deserving of some attention as regards the practice of medicine, inasmuch as they show how little weight the presence or absence of this symptom has, as a diagnostic sign of the disease.

With this view we shall present our readers with a concise account of the most important circumstances connected with them. In the instance related by M. Bourdon, the patient was a female, aged fifty-six, who presented herself at La Charité. Her disease was principally remarkable for a state of languor and emaciation; so great, that from this circumstance and the tinge of her countenance, Dr. Lerminier suspected the existence of a cancer, though unable to discover the seat of the presumed disease.

Her appetite was variable; digestion slow; diarrhœa alternated with constipation; the belly was not painful and presented no sensible swelling. There was no vomiting, but the patient suffered from nausea, particularly after meals. Sometimes she experienced all the anxiety which precedes and accompanies vomiting; deglutition was performed, and the jaws acted in the same way as a person who is going to vomit; several times indeed attempts at vomiting took place; on such occasions respiration was suspended, the abdominal muscles were hard and contracted, but still no vomiting took place. These unsuccessful attempts caused the patient a degree of anxiety scarcely to be expressed. Coughing often succeeded these efforts to vomit, and had the effect of removing the nausea. It is unnecessary to follow the history of all the symptoms and circumstances of the case; it is enough to mention, that the patient ultimately perished with symptoms of an affection of the chest; that her appetite continued good to the last day, and that she never vomited from the time of her entrance into the hospital to that of her death.

The examination of the body shewed, that together with other lesions which it is unnecessary to mention here, the stomach was a little more contracted then it ordinarily is; its parietes before their section appeared thicker and more resisng than com-

mon. By pressing the stomach from before backwards, its parietes could be brought into contact, and a part of the fluid contained in the viscus forced to escape by its cardiac opening, and thus fill the lower end of the œsophagus. The parietes of the organ were thickened and indurated, and it was impossible to distinguish the tunics one from another. The greatest thickening was at the curvatures and the pylorus, which was contracted, but not altogether obstructed. The only part which remained healthy, was the cardiac orifice and a small district around it.

Speaking of this observation, M. Bourdon reasons thus; here is a woman who makes violent muscular exertions to vomit, where consequently the stomach must be compressed by the abdominal muscles, and yet no vomiting took place, a proof that the action of the abdominal muscles is insufficient to produce vomiting, as M. Magendie asserts. We have already given the refutation of this argument, and proceed to make an abstract of the cases which M. Piedagnel opposes to it.

L. J. Delaitre, aged 32, entered the hospital Sainte Antoine, September 17, 1820. He had suffered from pain in the epigastrium for three months; during the same time he had bitter risings in the morning, attempts to vomit, and vomiting of sour matters of a very disagreeable smell. At the time of his admission the vomiting took place immediately after the ingestion of food, but only when it was of the animal kind, and in particular when it was fatty: vegetables were retained. He had no appetite, his mouth was foul, often bitter. The vomiting continued constantly, and the patient died October 14th.

On OPENING THE BODY the stomach was found to be pushed upwards and to the left side. It was divided into two distinct portions, the pyloric and the splenic. It was completely empty. Its sides were from three lines to an inch in thickness; they were cancerous, hard, lardaceous. This disorganization commenced some lines below the cardia, and extended to the pylorus inclusive. There were two apertures in the stomach, the one on its upper, the other on its under surface. The last of these was occupied by the left extremity of the pancreas, which had undergone the same changes as the stomach itself, and projected into its cavity. The opening on the upper surface was closed by the liver to which its edges closely adhered.

The second and third of M. Piedagnel's cases are of a similar nature to the one above described. In the third the patient perished at the moment of evacuating by stool, and by vomiting a large quantity of dark blood. In this, as in the former instance; a schirrous thickening of all its parietes was met with. His

sixth case is quoted from the *Observationes Medicæ* of La Riviere, for the purpose of proving that a healthy stomach is incapable of producing vomiting, if it be removed from the influence of the diaphragm and abdominal muscles. In this instance a young man of Montpelier, aged 24, had by the advice of an empiric, taken a dose of antimony, which produced violent attempts to vomit, but without effect. These efforts continued to torment him, reduced him to the last extremity in seven or eight hours, and ultimately destroyed him in the evening. On opening the body, the stomach was found in the right side of the chest, full of various matters. This situation was judged to be congenital, from the circumstance that the lung on the same side was wanting, and on the left had but one lobe. This young man had no difficulty of breathing.

After such facts, says M. Piedagnel, what are we to think of the conclusions drawn from a single case of cancer of the stomach, unaccompanied by vomiting? Is it not evident that some particular circumstances must have hindered it? perhaps the contractions of the diaphragm and abdominal muscles were not sufficiently powerful to compress the stomach, or to overcome the resistance of the œsophagus.

In fact, do we not every day see individuals weakened by diseases, who make repeated attempts to vomit, without succeeding? Do we not observe the same facts, even in strong subjects, suffering from diseases of the brain, and others? Do we not meet with individuals who have never been able to vomit, and in whom emetics cause serious accidents by the attempts at vomiting, consequent on their operation? This is also sometimes the case with dogs. In the last place, there are individuals affected with cancer of the stomach, who vomit during several years, and yet cease to vomit as the disease advances; after death the opening of the pylorus is found enlarged. M. Magendie communicated a remarkable fact of this nature to the author, in which the opening of the pylorus was found to be more than an inch in diameter in every direction, and the patient had ceased to vomit for three months preceding his death. This case, with some others in the possession of the author, has induced him to make some reflections on the nature of the vomiting in scirrhous affections of the stomach, and has convinced him that the nature and seat of the disease, are sufficient to explain the different appearances of that symptom.

When the cancer is situated in the pylorus, its form is such, that the opening is large and allows of a ready communication with the duodenum; here there is no vomiting, or if it does take place it is scanty, although the attempts be violent, for every

thing passes into the duodenum. It may be at first difficult to conceive that the contents of the stomach when compressed by the abdominal muscles, should have any tendency to escape by the intestines, which seem to be equally compressed; but when this contraction takes place for the purpose of producing vomiting, the lower part of the abdominal parietes first contracts; is then relaxed, and becomes slightly prominent, whilst the upper part is in its turn contracted, and continues so, until the expulsion is compleated. By such mechanism, the organs of the lower part of the abdomen suffer a slighter degree of compression than those which are higher placed. The following experiment will serve to support this idea. If a ligature be placed on the cardiac opening of the stomach of a dog, and an emetic introduced into the veins, the animal attempts to vomit, but as the ligature hinders the contents of the stomach from escaping at its superior aperture, they pass very readily through the pylorus and the whole intestinal canal: In one dog, after a single effort, the coloured fluid introduced into the stomach, had diffused itself through all the intestines, even to the anus.

When, on the other hand, the scirrhus is of such a kind as compleatly to close the pyloric opening, vomiting is very frequent, and in such cases death takes place much sooner; and appears to be occasioned as much by defective nutrition, as by the nature of the disease; whilst in the former instances, nutritious substances readily passing into the intestines, chyle may still be formed; the progress of the disease is much more slow, and appears to be the sole cause of death. When the cancer is situated at the cardia, if that opening is enlarged by the consequences of the disease, vomiting is very easy, and very abundant. Such was the case in seven observations in the possession of M. Piedagnel, with only one exception, in which the patient had only some slight vomiting at the commencement of the disease, when its nature was doubtful. It is hard to say what would be the consequence, if the cancer should considerably diminish the size of the cardiac opening, but it is probable that there would be little or no vomiting. The only observation of this kind M. Piedagnel has met with, was a coachman at the Hospital Sainte Antoine, in 1819, who laboured under all the symptoms of cancer of the stomach. There was one particularly in the vomiting, that this evacuation was tolerably free in the beginning, while the straining was slight; but all at once it would stop, the attempts then becoming much more violent, though unsuccessful.

The patient died, and on opening the body, a circular cancer was found at the cardia, together with a contraction of that

opening: on its right side a round, reddish body, sprung from the mucous membrane, and had a great tendency to introduce itself into the œsophagus, and thus to close the lower extremity of that canal. M. Piedagnel regrets that the fœces, passed after the attempts at vomiting, had not been examined; for, as he says, the preceding observations render it probable, that they consisted of undigested food, which had passed rapidly through the alimentary canal.

Before concluding his Memoir, M. Piedagnel relates a curious case, mentioned in the thesis of M. Lallemand, Professor of the School of Medicine at Montpelier, and which served to confirm this able observer, in the idea that the stomach performs an active part in vomiting. It is as follows:—A patient, who had been for a long time confined to a spare diet, in consequence of indigestion, took all at once a large quantity of food; a sensation of weight at the stomach soon followed, with nausea, and a wish to vomit, but the attempts to effect this, though violent were fruitless. All at once, in the midst of extreme anguish, she experienced a severe pain in the abdomen, accompanied with a feeling of laceration; she uttered some loud cries, and fell without sense; her body was covered with a cold sweat, and the attempts to vomit ceased; she died in the night. On opening the body, the cavity of the peritoneum was found full of food, still distinguishable, half digested, and of a sour smell. The middle and anterior part of the stomach was obliquely torn, from its lesser towards its greater curvature to the extent of five inches. The edges of this opening thin and irregular, presented no traces of previous disease. The three membranes of the stomach were not torn to the same extent, nor exactly in the same direction. The laceration of the peritoneum was most extensive, and that of the mucous membrane less so. The pylorus presented a circular contraction, depending on a schirrous thickening, an inch and a half in size; the rest of the stomach was perfectly healthy: the cardiac opening was pervious, and not in the least affected.

"I am far," says M. Piedagnel, "from concluding with Professor Lallemand, that this case proves that the stomach contracts convulsively for the purpose of rejecting its contents. So far, indeed, on the contrary, that I think it confirms the new theory of vomiting. I see nothing in the case but an enormously distended stomach, extending into the lower part of the abdomen, and strongly compressed by the abdominal muscles; but as its contents could not pass through the contracted pylorus, as the cardia also refused to allow of their passage, and as the contractions still continued, the organ gave way; and at

what part? At its anterior part, which was least compressed because it descended lowest, and, because as has been shown above, the force was less powerful than at the upper part."

M. Magendie adds a note on this point, to mention that in horses, in which vomiting is very difficult, the stomach is sometimes found to be torn in the attempt to reject its contents. The rupture constantly occurs along the great curvature, it is here also that a horse's stomach bursts, when filled with air, and forcibly compressed. M. Dupuy, Professor at Alford, has lately made some interesting researches on the subject.

M. Piedagnel terminates his Memoir by drawing the following conclusions from his observations and experiments:—1. That the stomach possesses no contraction capable of producing vomiting. 2. That in vomiting the stomach acts only by contracting gradually and slowly, after the evacuation of its contents. 3. That vomiting is produced by the abdominal muscles and diaphragm. 4. That the force exerted by these muscles in vomiting is not equally diffused over all the abdominal viscera. 5. That the state of the pylorus and cardia causes some modifications in vomiting, when a cancer of the stomach exists.

On Scarpa's Temporary Ligature in Aneurism, with Cases by Giuntini, Uccelli, and Menegazzi.

The unsuccessful result which attended one of the cases published by Mr. Travers, in the ninth volume of the Medico-Chirurgical Transactions, in which the temporary ligature of the femoral artery was employed for the cure of a popliteal aneurism, and the opinion expressed by that gentleman of the hazard attendant on this practice, besides the inconsiderable advantages to be expected from it, even in the most fortunate event, seem to have left an impression upon the minds of English surgeons, very unfavourable to the employment of this operation. Mr. Roberts indeed has since published a case, in which the ligature was employed with a happy result: with this exception, we are not aware that the operation has been repeated in this country.

On the Continent, but more particularly in Italy, it has met with many advocates, and among them Scarpa, whose name cannot fail to have a great authority on any subject connected

with surgery, and particularly with aneurism, which he has so fully investigated. It is probable that if he and some others of the supporters of this practice, have exaggerated its advantages in England: on the contrary, we have been too hasty in forming an unfavourable judgment on the subject, our experience being still so limited, and the facts on either side of the question so few.

We therefore feel gratified in being enabled to lay before our readers, from Omodei's Annali, the history of three cases in which this mode of practice was adopted. The first of these is related by Giuntini, Professor of Surgery in the Great Hospital of Florence.—* A young woman, aged 22, and of a delicate habit, was wounded August 7th, 1820, in the upper and inner part of the fore-arm. The great loss of blood, and the seat of the injury indicated a wound of the ulnar artery. The surgeon who was called, removed a bandage which had been applied in the first instance, and the wound united by the first intention. On the ninth day the hemorrhage reappeared, and was restrained by the tourniquet and by compression on the wound. In this state the patient was carried to the hospital, August 22d. "I removed the tourniquet," says Giuntini, "and exposed the wound, which did not bleed. Every thing proceeded well, until the morning of the 26th, when a pulsating tumour was discovered in the lower angle of the wound, in the direction of the ulna. This circumstance determined me on exposing and tying the ulnar artery, which however proved to be impracticable, from the suppuration of the wound, the quantity of coagula, the flow of blood, and the depth at which the artery lay. I therefore resolved on tying the trunk of the brachial artery above the bend of the elbow, according to the method of Professor Scarpa, that is by employing a single ligature, and interposing a cylinder of linen, spread with cerate, between the ligature and the artery, for the purpose of preserving the middle and inner coats of the vessel from rupture. Shortly after the operation a slight pulsation was felt in the radial artery, and in its dorsal and palmar branches.

At the end of the third day from the operation, by the aid of the nail of the index finger of the left hand, I introduced a small convex-edged knife to the bottom of the wound, and cautiously divided the ligature on the cylinder of linen, and removed the whole with great facility, as I had taken the precaution of attaching the cylinder to a thread. This being done,

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* Omodei, Annali Universali Medicina, 1821.

I brought the edges of the wound together with strips of adhesive plaster. On the morning of the sixth day after the operation, I found the upper wound healthy, and the lower in full suppuration. The pulsations of the radial artery became daily more manifest, and the remainder of the cure proceeded regularly.

In the second CASE by Uccelli, Professor of Surgery, in the Great Hospital of Florence, the femoral artery of a man, aged 37, was tied in the usual place for the cure of a popliteal aneurism. The operation was performed with a waxed ligature of several threads, a cylinder of linen being interposed between the ligature and the artery. In addition, for the purpose of facilitating the removal of the ligature, a small director, grooved and curved at the point, was placed between the cylinder and the ligature. On the fourth day from the operation, a pair of scissors was carried to the bottom of the wound, in the groove of the director, and the ligature was divided and removed together with the cylinder. The edges of the wound were then brought together with adhesive plaster. The pulsation in the aneurismal sac ceased, and the tumour gradually diminished in size from the day of the operation. About the twentieth day serious constitutional symptoms took place, though apparently independent of the operation. Notwithstanding this the femoral artery remained at the point where it was tied, quite impervious to the current of blood.

The third CASE is related by Menegazzi, Physician and Surgeon to the Hospital of Lendinara. Bellin Panfilio, aged 44, a fisherman, of the Commune St. Urban, Padua, had for three years suffered successive injuries in the lower extremities. At the end of that time he perceived a small indolent tumour on the left ham, which he neglected, but as it increased in size, it became inconvenient, rendered motion difficult, and induced a degree of numbness in the leg, which confined him to his bed, in which he had been four months when I saw him. The pulsation in the tumour was manifest, but was removed by compression of the femoral artery, which also reduced its size. it was about as large as a turkey's egg, prominent in the middle, and the integuments covering it so thin as to threaten rupture. This determined me on hastening the operation, in spite of his bad state of health, aggravated by poverty, confinement, and constant suffering. Having removed the patient to the hospital, and premised some gentle purgatives, I proceeded to this operation on the morning of the 3d of January, 1820.

The femoral artery being exposed by an incision in the upper part of the thigh, I detached it to a sufficient extent to

allow the passage of a needle with a ligature, I then placed on it a roll of linen spread with cerate, and drew the ligature so tight, as to stop the pulsation in the tumour: I then brought the wound together with adhesive plaster. The patient experienced but little pain from the operation, and I placed bladders filled with warm water on the limb, and left him to repose.

On the fourth, he complained of dryness and bitterness of the mouth, with thirst and pain over the eyes. His bowels was moved by castor oil: He felt no pain in the knee or leg, but did not sleep at night. On the fifth, as the same symptoms continued, I ordered a decoction of tamarinds. On the morning of the sixth, I removed the dressings; I found the wound partly closed by adhesion, and open only at the point corresponding to the ligature, which I readily removed, together with the cylinder, closing the wound with adhesive plaster. The symptoms increased, being accompanied with fever, head-ache, bitterness of the mouth, &c. I ordered an emetic-cathartic draught. The suppuration was copious and extended in the course of the femoral artery. On the twelfth it was necessary to open a small abscess, which had formed near the groin. On the following days the flow of matter was less copious: the state of the patient was improved. The size of the tumour had diminished by one-half, and the limb could be moved without difficulty. On the eighteenth M. Menagazzi was compelled by the state of his health, to abandon his patient to another surgeon, and did not see him again until the 16th February, when he found him almost expiring. He discovered the cause of this to be the suppuration of the aneurismal tumour, and the diffusion of matter through the whole leg, with fever, delirium, and emaciation. He opened the tumour and evacuated a large quantity of matter, but without relieving the patient, who died on the following day. The wound of the operation was closed, and the thigh was in a natural state.

On DISSECTION the injection of colored wax by the abdominal aorta, shewed that the parietes of the artery had adhered at the point of ligature, and that the vessel was impervious from this point to its division into the superficialis and profunda of the thigh. The parietes of the external iliac were much thickened, and firmly connected to the surrounding parts. Beyond the femoral arch, the parietes of the vessel were still more thickened and confused with the parts in the vicinity. The coats of the profunda were in a healthy state. Below the point of ligature the internal surface of the artery was not adherent, and still lower down, it contained some purulent matter, similar to that found in the tumour. The cellular tunic enclosing the aneurismal

sac was ulcerated and disorganized. The bones in the neighbourhood were in a state of caries.

In addition to these important observations, the Editor of the Annali Universali says, that he knows on good authority, that the surgical clinic of Prague has presented some remarkable examples of the utility of the temporary ligature, and that the history of these observations is likely to be soon laid before the public.

Our limits do not permit us to follow Dr. Omodei, through the whole train of reasoning which he has employed to invalidate the inferences which may be drawn against the employment of the temporary ligature from the first case of Mr. Travers. The point on which he seems principally to insist, is, that in this instance the ligature was withdrawn from the artery, after a period of time, (twenty-seven hours,) too short to have effectually secured the union of the coats of the vessel; and that for the estimate of the length of time necessary for this process, we should refer, not so much to experiments performed upon brutes, as to what is daily observed in the human race, with regard to the cause of simple wounds by the first intention, which is rarely compleated before the third day. It is from the identity of the adhesion of wounds, with the coalition of the coats of a tied artery, that Scarpa has laid down the general principle, "that the ligature should not be removed from the large arteries in the human subject before the expiration of the third day." Mr. Travers has also been led into error when he supposes that Scarpa employs two ligatures over the roll of linen. He has long employed but a single one, composed of several threads, applied with the least possible detachment of the artery. We are likewise informed in the Dict. des Sciences Medicales, Vol. 28, that M. M. Boyer and Roux continue to operate for popliteal aneurism after the method of Scarpa, and that they ordinarily remove the ligatures in three or four days.

There is a circumstance in Mr. Travers's case, which seems to us to deserve consideration. If the temporary ligature was inadequate to restrain the circulation through the artery, how comes it that no secondary hemorrhage took place, or that no aneurismal tumour formed at the point of ligature (the inner coats of the vessel being necessarily cut)? Have we not an equal right, in the absence of positive information, to suppose that the pulsation in the tumour returned, from the establishment of a collateral circulation, which as we know occasionally takes place? We are aware that this is but conjecture, but we do not think that it is contradicted by any other circumstances in the case, not even by the effects which followed the application of the second ligature.

Prevost and Dumas' Experiments on the Red Globules and Transmutation of the Blood.

These Gentlemen, passing over the other constituents of the blood, have directed their observations chiefly to its red globules. They have examined these with a microscope in the foot of a frog and in the wing of a bat, and also in blood drawn from the body. In the former cases the globules have presented to them, sometimes a flat surface, sometimes their edge—at others balancing themselves in the liquid in which they are suspended, they have afforded a view of their forms, more or less oblique. From repeated and careful observations of this kind, Messrs. Prevost and Dumas have adopted the opinion of Hewson, that these globules are flat, and furnished with a point swelling out in the centre. They do not therefore admit the opinion of Sir Everard Home, that they are in any case strictly globular bodies.

With regard to the shape of these red particles, they coincide with Hewson, who found them to be circular in the mammalia, and oval in birds and in cold blooded animals. They have measured their diameter in the frog and bat, by means of a micrometer; and have also determined their size, after they were withdrawn from the vessels. This was done by rapidly drying small drops of blood upon a plate of glass, by which means the globules retained their proper figures—they then brought the object seen through the microscope by the right eye, to coincide with a graduated scale perceived by the left eye; and often they chose a line of globules, and by determining its length, and the number of globules, found easily the diameter of each. They have not found any change take place in the size of the globules, after their leaving the blood vessels, provided they took proper care to have the drop of blood quickly dried.

In a table of the diameters of these red particles in various animals, we find those of man, of the dog, of the rabbit, pig, Guinea-pig, and hedge-hog, to be alike, 1-150 millimetre, or 1-3100 of an inch. Of the ass to be 1-167 millimetre, or 1-4200 of an inch; of the cat, and mouse, 1-171 millimetre, or 1-4300 of an inch; of the sheep, horse, mule, cow, 1-200 millimetre, or 1-500 of an inch; of the goat, 1-288 millimetre, 1-700 of an inch. Globules of similar form and dimensions were found in the milk, pus, and chyle of various animals. In all their trials those red globules of the blood readily formed

themselves into lines, resembling in every respect the muscular fibre; and the true muscular fibre in whatever animal they examined it, presented globules of similar dimensions and properties with those of the blood. This discovery of Sir E. Home is therefore confirmed by them. Fibrine they also found to be merely a collection of globules, and they think that these little bodies exist in the particles of the blood, and that the colouring matter forms a sort of membranous vessel in which they are enveloped. This vessel is flattened, so that the whole takes the form of a piece of money, with a slight central swelling.

The white of egg when submitted to galvanic action is decomposed, as ascertained by Mr. Brande. Concreted albumen takes the positive pole, and pure soda the negative. Messrs. Prevost and Dumas have applied the microscope to the first of these, and have found in it globules completely resembling the red globules of the blood, when deprived of their colouring matter, or those found in pus, milk, and chyle. They have the same forms and diameters, and the same disposition to arrange themselves in lines. This result, it is hoped, will throw some light upon animal secretion, and especially on the formation of chyle. They remarked also, that when the two galvanic poles were brought into contact with the white of egg, the soda which was carried to the negative pole reacted on the undecomposed part, and formed with it a firm substance resembling jelly, and perfectly transparent—in a word having all the properties of mucus.

Before quitting their experiments, these philosophers turned their attention to the transmission of blood from one animal to another—an operation which they regard as having shared the fate of many others, at first too highly celebrated, afterwards treated with unmerited neglect. When an animal is bled to fainting, so that the action of the heart and lungs is suspended during several minutes, it is almost certain that life is then for ever extinct. If in such a case, water, or the serum of the blood, or any other liquid be injected, no alteration is produced, but if the blood of an animal of the same kind be injected, every portion gradually reanimates such a dead carcase, as it may be called; and it is not without astonishment, that the animal as soon as a quantity is injected, equal to what it had lost, is seen to breathe freely, to move about, to take food, in fact to be completely restored to health.

If the blood injected be that of an animal of different species, although possessing globules of the same form and dimensions, the animal is but imperfectly restored; and seldom survives more than six days. The pulse becomes quick, the respiration preserves its usual rate, but the animal heat sinks very rapidly:

from the moment of the operation the dejections become mucous and bloody, and remain so till death. If blood having circular globules, be injected into the system of a bird, the animal quickly dies from extremely violent nervous paroxysms, resembling such as are produced by intense poisons. In cases of death, from sudden hæmorrhage, this operation, they think, might be useful; but, on the whole they are disposed to condemn its employment in man, until we become better acquainted with the active properties of the blood.

Our readers will observe, on perusing this interesting paper, that their observations, with regard to the shape of the red globules of the blood, and also, with regard to the separation of the colouring matter, are at variance with those of Sir E. Home, and Mr. Bauer; and we cannot help regretting, along with the Editor of the Annales de Chymie, that no effort had been made to discover the cause, which could have led into error men so accustomed to nice observations. We can only account for this variation in the results, from difference in the mode of conducting their experiments. Messrs. Prevost and Dumas do not seem to be aware of the existence of that transparent mucus, first discovered in nervous matter by Mr. Bauer, and afterwards, in the blood by Sir E. Home. This latter gentleman, supposes that in the red particles, it attaches the colouring matter to the colourless globule; and that these red particles, when put into water, lose their colour from the medium dissolving, by which it was attached. It is probably, owing to a change in the consistence of this substance taking place after exposure to the atmosphere, arising from the escape of some of its constituent parts, or the imbibing of others, which causes the colouring matter to assume the form described by Sir E. Home in his experiments; whilst from the care taken by Messrs Prevost and Dumas, quickly to dry the drop of blood under examination, no dilution would take place; and, of course, no such change in the appearance of the globules.

The Editor of the Annales de Chymie, who has had the manuscript in his possession, adds another result derived from their experiments, which, certainly, ought not to have been omitted; namely, that the size of the colourless globules, which exist in the red particles, is the same in every animal which they have examined, being 1-300 of a millimetre, or 1-7600 of an inch, English; whatever form, circular or elliptical, the particle might have.

It is remarked, by the same Editor, that they seem not to have had in view, what is stated by Hewson concerning the variation in the size of the globules in the same animal, and

also the changes which they undergo at different ages. The globules in a chick, six days after incubation, are larger than those of a hen; and those which in some young animals are circular, afterwards become elliptical. This change in the size of the globules from age, suggests the probability, that variation in this respect may also arise from other causes. We would suggest it to those fond of experimenting, as an object worthy of research, to ascertain whether inflammation may have any effect on the dimensions of these globules; as also, the influence of hot climates, and of the electric fluid. We think, also, the explanation usually given, of the formation of the buffy coat of blood in inflammation, is far from being satisfactory, especially whilst so little has been done to ascertain the characters which distinguish inflammatory from healthy blood.

RICHTER'S PRESENT STATE OF MEDICINE IN RUSSIA, WITH THE HISTORY OF RUSSIAN DISEASES.*

We are not partial to the Russians, for the same reason that we are not partial to the New Hollanders; but in medicine, which is a science so much built upon experience, we may learn something even from barbarians. Our manufacturers of perfumes are well aware of this fact; hence our Russian oil, and our Macassar oil: and why, when we have thus discovered an instrument of luxury, may we not also discover among the tribes of Russia, some powerful, and hitherto unknown medicine, or mode of cure.

We are, indeed, indebted to the Russians for the powerful vapour bath; as we are to the Hindoos for the art of shampooing; and, perhaps, we may on inquiry find some other valuable practices, not yet known among the learned.

It is unfortunate, however, that we know so little, and can learn so little of their unschooled practice; for Russia is now so amply supplied with surgeons from Germany and other parts of Europe, that the peculiarties of practice there, are neither striking nor important.

This much laboured and voluminous work, is one of those which cannot well be abridged. It is not, in fact, the History

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* Geschichte der Medicin in Russland, entworfen von D. Wilhelm Michael, von Richter, &c. &c. 3 vols. 8vo. Vol. I. 1813. Vol. II. 1815. Vol. III. 1817.

of Medicine in Russia, but rather a detail of the progressive steps of *Medical Economy* in that country, both since it began to figure in the annals of Europe, and even previous to that period. It might, with propriety indeed, be entitled a Biographical Dictionary of nearly all the native and foreign Sons of Esculapius, of whatever class or denomination, famed or fameless; titled, or untitled, or all these combined, as they seem to be in Dr. W. M. Von Richter himself, with his endless catalogue of additions.*

Altogether, however, from the perusal of the publications, proceedings, and prescriptions, of which this work presents a tedious catalogue, some real information concerning the history of medicine in Russia, may be occasionally gleaned; besides, by the numerous pages which he has filled, at the expense of the imperial archives, of monastic diaries, and patrician parchments, he must charm and delight archæologists, and adepts in the diversified forms of Etiquette and Address; such for example as, "ELIZABETH, by the Grace of God, Queen of England, France and Ireland, Defender of the faith," &c. "To the Right-highe, Mighty and Right-noble Prince BORIG. FEDOROWICH, great Lord, King and Great Duke of all Russia, Volodemer, Mosco, Novogorod, King of Cazan and Astracan, Lord of Vobsco, and Great Duke of Smolensky, Ottwer, Ughory, Perme, Vatsky, Bulghary, and other Places: Lord and Great Duke of Nowogorod in the Lower Countreys of Chernigow, Rasan, Polotsky, Rostovsky, Yaroslavsky, Bealozero, and Liefland of Ouderskey, Obdorskey, and Commander of all Seberland, and the West coasts, Great Lord over the Country of Iverskey, Grusinskey, Emperor of Cabardinskey, and of the country of Cherkasky, and of the country of Igorskey, and of many other countries, our most dear and loving brother. When we heard," &c. &c.

"At this present time we are to pray your Majesty at the request of the friends of *Mark Ridley*, our subject, Physician to the late Emperor, whome at his request wee sent unto hym, now four years passed, to grant hym lycence to

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* Wirkl. Staatsrathe, Ritter, Professor, Praesidenten der Physisch-medicinischen Gesellchaft, Ehrenmitgliede der K. Academie der Wissenschaften, der Medicinish-Chirurgichen Academie, der Universitæten von Wilna, Charkow und Kasan, Mitgliede des Medicinal-Raths, der Naturhistorischen und Geschichtforschenden Gesellschaft in Moskwa, der Physischmedicinischen in Erlangen und der Kaiserl. Leopoldinisch-Carolinischen Academie, so wie auch correspondirenden Mitgliede der Königl. Societæt der Wissenchaften in Göttingen, der Medicinischen in Paris und der Kaiserl. menschenliebenden Gesellschaft in Petersburg.

returne hether to his natyve countrey, &c.—with many others of a similar kind, in French, German, Latin, and Russian, and of different Emperors and Empresses, Kings and Queens, Patricians and Doctors, and for different purposes of, (we should say,) Medical Diplomacy. Happily, however, for us, Russia has now so many public institutions, and so many native professors in every branch of the healing art, and so great an impulse has of late years been given there, to every thing which could accelerate the developement of the mind, by the zeal of Alexander, that we look for an accurate history of medicine in Russia by some learned natives, in the vernacular tongue—now making rapid progress in the hands of a directing academy, and has already a poet laureate of the court in Ionkowski, emulator of Lomonopy and Derjawa,—rather than in a mixture of Russian and German by the son of a foreigner, who hardly can feel for Russian patriotic enthusiasm—and thus spare us the trouble of going over so many works and pamphlets, scarcely to be obtained even in Russia.

We believe such a man will not pass over in silence a name like J. P. Frank, who having refined his northern genius under the Italian sky, at the University of Pavia, was invited by the reigning Emperor, to regulate the clinical studies of the old as well as the newly created university of the empire—when he commemorates a Hermann Kaan, a Boerhaave, whose only merit was a *relationship* to the great Dutch physician; when after quoting *Brust-thees* and *Brust-zucker* (pectoral teas and lozenges), with which he had enriched the Russian *Apotheke*, he records even such antiquated prescriptions as these :—

℞. Herb. majoranæ,
——— menthæ,
——— matrica,
——— meliss,
——— salviæ,
——— sabinæ,
——— serpylli,
——— thymi,
——— rutæ,
——— rorismarini,
aa. manipulos tres,
Florun borraginis,
——— aurant,
——— lavend,
——— stœchad,
——— rossarum rubr.

aà. unciam unam.
—— althææ.
—— malvæ.
—— violar.
—— papav. erratici.
—— sambuc.
aa. unciam unam et semis.
Radic. althææ.
—— fœnicul.
aa. uncias sex.
Conciss. mixt. f. species.
ad balneum in semicupio.
Pour sa Majesté Impériale, 1749, die 15 Maji.
(Signed) BOERHAAVE.

℞. Resin. scammon. scrupulum semis.
Stibii diaphoretici non abluti, grana xij.
Sacchari cand. drachmas duas.
Massæ pilularum de cynoglosso gr. vj.
Ol. still. macis, guttam unam.
Diu tritis simul in mortario vitreo sensim et divisim conterendo admisce.
Spiritus Reginæ Hungaricae Monsp. drachmas duas,
Emulsis penitus admisce.
Aquæ still. Mellissæ simpl. drachmas sex.
Aquæ cort. cinnamomi, drachmam unam.
Iterum de novo conterantur simul et a fœcibus.
Depurata exhibe pro haustu.
Detur pro una dosi mane vacuo stomacho hora 4ta. vel, 5ta. assumenda.
Pour sa Majesté Impériale, 1749, die 16 Maji.
(Signed) BOERHAAVE.

(Who would not like to be Emperor of all the Russias, were it for nothing more than to have the inheritance of such *delicious* prescriptions ?)

And finally, when he preserved from oblivion in the third volume, even the interesting effigy of Doctor *Count* Lestoc, emblazoned with all his ornaments, for this royal reason, " He was Physician of an Emperor." Was he, we ask, an Emperor of Physicians ? We never before had the honour of hearing his name. For fear, however, of being too forward in judging, we may, perhaps, from the author's high situation, expect nearly every thing concerning the late establishments, and characters, as he intends next lustre to favour the public with a fourth volume.

The work altogether seems to be more calculated for local interest, than for the interest of the science. Nevertheless, until improved by another, it offers to the reader several chapters of general interest. Such are those which relate to the domestic life of the ancient Russians; to the effects of the newly introduced civilization and luxury, particularly at the Court of the Czar and at the Patrician Palaces; and to the national manners and customs; the use of the vapour baths, &c. From the perusal we were brought to the same conclusion, either with the author and Voltaire—

> " Comme ils sont sans Palais
> Ils sont sans Hospitaux"—

or with the author and Pliny, " His 600 annis quibus Romani medicis caruerunt, morbos sanavit domestica medicina, brassica, beta."—Amidst so much lumbering stuff, we must do our best to find something of use to our readers, supplying from our own stores such materials as may seem to be wanting.

The most dreadful PLAGUE that is on record, ravaged Russia towards the middle of the fourteenth century. It is the same which sent to the third heaven the *Laura* of *Petrarch;* it is the same which afforded to the Parisian Chemists, in our own times a new light on putrefaction; it is the same, which, all over the known world, as well as in Russia, destroyed nearly three-fourths of the population. In the general silence of European writers about what happened in Russia on that occasion, the author was only enabled to derive some information from national chronicles; but for this very reason we believe these ancient *data* to be important, as flowing from original sources which had never been explored. The plague in Russia, as in some other countries of Europe, was called Carnaia Shmerth—*Black Death*, from the black colour which the skin assumed after death. This tremendous visitation in Russia, as every where else, made men lose sight of temporal interest in their care of the soul —much wealth was bestowed on religious foundations— and the people finding medical assistance unavailing, placed their only reliance in prayers, processions, and sacerdotal benedictions. Boccacio alone had recourse to gaiety, and with country air, light company, and the ludicrous *Decamerone*, escaped.

The Russians attributed the source of the CONTAGION to China, as did some European writers, amongst whom De Guignes, in his Histoire Général des Mogols, goes so far as to quote the Chinese Annals in proof. Some time afterwards the

scourge was carried from China to the shores of the Levant, where commerce was most flourishing at that epoch, rather by means of the Caravans, which every year crossed Tartary from the Chinese Walls to the Northern Caspian Sea, and even to Azof, than by the maritime passage of the Red Sea. The fact is, that the contagion which happened there about 1348, spread from that quarter to western and northern Europe, and even to all the then known African Coasts, and in all these places it raged furiously till 1352. It is curious to observe that Russia,—although the Caravans were nearly touching her southern frontiers, although governed at this period by Tartars, who some years before had subdued the country, although in direct communication with its Tartar masters—was not infected by that quarter, and yet the land Kaptshacth (Cumanien), and its capital *Sarai* were nearly destroyed by the plague, and the same happened at Yeholdai, Ormtschai, and even at Astracan, as Levesque says, in his Histoire de Russie. It is true that Le Clerc says otherwise, and maintains that the plague appeared in Russia even in 1343, and that it was brought there by the Tartars, but he gives no proof; and no traditional report, no cotemporary chronicle mentions it, whilst they all detail and in the same manner, the partial irruption of the plague into the towns of the European frontier, such as Pleskow, Novogorod, &c. in 1350, and the tremendous one of the next year 1351, which spread rapidly from this place over all the country. This plague, like that of the sixth century, which equally spread from the Asiatic shores to Constantinople and Rome, after the first fury had abated, appeared some years afterwards a second time, though milder, and a little dissimilar in symptoms, as may be seen in Freind's Historia Medicinæ, page 387. "*Altera species,*" he says amongst other things, "quæ *priorem* excepit, cum febri continua invasit, *carbunculis et abscessibus in præcipue in inguine et sub alis;* hæc priorem lethalitite equavit." The first was beginning with fever, but a bloody vomiting was soon afterwards taking place, and on the second day, or on the third to the utmost, the patient died, without any *carbunculus* or *abscess* whatever. The Russian Chronicles give the same description as all the medical and other writers of the time, such as Gentili of Fuligro, Galeazzo di Santa Sofia, Boccacio, Guy de Chauliac, &c. but it seems that the second species did not equal the first in *mortality*, as Freind says, on the authority of Guy a Cauliaco, as Guy de Chauliac himself proved by his example, having been happily cured, and the other writers, and the Russian Chronicle itself asserts the same. Might not the contagion by time be altered in its nature, and rendered even inoffensive?

Many other examples would tend to prove this. After their first rage, the small-pox became milder, the venereal contagion with the lapse of centuries was rendered less pernicious, and leprosy by little and little has entirely disappeared. But waving this question for a moment, let us rather observe what the history of plague clearly shows. The contagion not only followed the track of commerce from China, but it was first propagated in the chief trading towns of the Levant, and was spread by the Genoese, the Venetians, and the Portuguese, over Africa and the rest of Europe. The sea-ports were every where the first to be infected—meanwhile Tartar Caravans passed close to Southern Russia, but they had no communication together; she received Tartar emissaries, but not Tartar merchants, and, therefore, was not infected by that quarter, at Kaptshaht and Astracan, which were more frequented by traders. Two or three years after, however, Russia received the plague from the European frontier, where she had more free communication with Poland and Sweden, and much greater commercial intercourse. Let the unbeliever in the contagion of the plague answer to these facts! How could the simple change of the atmosphere tread on the footsteps of the merchants? And why did the atmosphere of Tartary respect the South of Russia, while the atmosphere of Sweden and Poland was so unpolitely infectious? Inflammatory symptoms of the lungs were striking in the black death, says Richter after the Chronicles; pain of the breast, unhealthy expectoration, breath often fœtid, bloody vomiting, delirium, vigilia, black and dry lungs after death. Richter believes the fever to have been contagious, and even supposes the plague met with more obstructions in its course in the present day, through public and private cleanliness, manner of living, and above all by quarantine laws; but afterwards he begins to be uncertain from which channel the plague made its first appearance in Russia, as the *historical evidence*, establishes the opinion of the transmission of it through Europe, whereas the *prima facie* consideration would suggest Asia as the *natural line of communication*.

Some other interesting facts might be collected from the work, concerning popular diseases of the last centuries, but as we hope to see a better exposition of them, from some more accurate Russian of science, so we shall content ourselves by only quoting a passage from a diplomatic parchment, of the end of the fifteenth century. A person, of the name of Mamonow, was sent by Iwan Wassiljewitsch to the Prince Alexander of Lithuania, the third son of the King Cassimir, and besides many political and religious secrets to be communicated to his daugh-

ter, married to the Prince, he was to enquire at Viaesma, "If any body ever came from Smolensk, infected with a certain disease which covers the skin with eruptions, and had been just called the French disease (franzuskaia), and, if it is true, that this scourge had been brought there from Wilna?" Strykowsky maintains, in his Chronicle of Lithuania, that the venereal disease, in 1493, had been brought by infection from Rome to Cracow, in Poland, and that it spread more and more by the means of the wars of 1495-6. *The venereal disease was, therefore, certainly brought into Russia from Poland, about the end of the fifteenth century*, and the authority of Dr. Samuel Collins, physician to the Czar Alexeis Michaelowitz, in a work of 1667 confirms the same. He says, humorously in a letter to a friend, printed at London, in 1671:—"My lady, *Lues Venerea*, is as well known in Poland, as in the place where you were borne The Russes, in the conquests of many towns and provinces on the borders of Poland, have taken her ladyship prisoner." For till this war, she was not known here; and our author cannot understand any other war from the circumstances, but that which followed the mission of Momonow, and which occasioned the slaughter of the 14th of July, 1500, so disastrous to the Prince Alexander, who was then king. The famous question, comes here to be discussed, which has been so much agitated in the medical schools:—Whether the venereal disease was brought into Europe, from the Antilles, by the crews and soldiers of the American discovery, as Astruc and Girtanner thought, cohabiting with the people of Europe; or if the disease was only an augmentation of one already existing in Europe, which took place towards the end of the fifteenth century, by the very diminution of the *Lepra*, as Sanchez, Hensler, and lately, Sprengel, were pleased to maintain against any introduction of contagion from abroad. To point out to these men, the geographical steps of the disease, and its geographical ramifications on the very track of soldiers, is a reason of no weight; otherwise, they would never have contradicted the public opinion. But what has this to do with the diminution of the European Lepra, which, very probably, would have disappeared, even without the American discoveries, as it was already diminishing before?—What has it to do with the bad venereal disease, which the Europeans found in America at their arrival?—What analogy did ever exist between the lepra and the constitutional symptoms of the venereal disease? It may resemble, sometimes, the secondary symptoms, but by this mode of reasoning, it would be much better to say, that *tinea capitis*, the many varieties of *psora*, that every eruption, that every running, that every swelling of the bones, &c. are venereal also. Besides, what

analogy did ever exist between the mode of treatment of the one disease, and of the other? And what shall become of medicine without analogy? It would be, perhaps, less irrational to say, that as, in the late years, some augmentation was found in the symptoms of the venereal disease, when soldiers and females, of distant regions, came into contact in Italy and the neighbouring Isles, in Egypt, in Russia, in France, and the same might have happened between the Americans and the Europeans, at the epoch of Columbus; but no augmentation of our days, was ever to be compared to the enormous aggravation of the gonorrhœas, ulcerations, buboes, eruptions, known before that epoch amongst our forefathers. These diseases were before mentioned as light diseases, occasionally exasperated by lepra or psora, not in the least contagious, or very slightly so, as any acrid humour of the human body is and (what is of the greatest importance) often curable with only soap and water; but what precautions were not afterwards necessary for avoiding the venereal contagion, and what powerful curative methods were not resorted to, not only for curing them, but for merely alleviating them? And, why did not Russia receive this disease from Asia, where gonorrhœas, ulcerations, eruptions, and lepra itself were always so common; where religion went to the help of the bodily health even with the circumcision? Why did the pretended venereal contagion of the old world stop at her southern frontiers, like the Black Death of the Tartarian Caravans? There were typhus fevers before the plague; but the plague, is at the *apex* of the *genus!* There were slight diseases, like the venereal in appearance, and even sometimes capable of being transmitted from human body to human body, as we have had occasion to observe amongst the most delicate *conjujes*, particularly during the catamenia; but the venereal disease, like the black plague of China, is the *maximum* for contagions of such diseases.

Now that our task of reviewing the book of Dr. W. M. Richter, &c. &c. &c. is finished, let us come again to Dr. W. M. Richter, &c. &c. &c. himself, not, indeed, to give an account of himself, for this he has taken care not to leave to others; but to outstrip him, if possible, in his favourite course, with a short account of the present MEDICAL EDUCATION AND LITERATURE in Russia, as we have been able to collect from some Russians of learning, and physicians lately arrived in this country.

The Medico-Chirurgical ACADEMIES of Petersburgh and Moscow, established by the same charter, and the Medical Faculties of the Universities of Moscow, Charcow, Kasan, Wilna, Dorpat, and Abo, are the chief and only regular sources of medical

instruction in the Russian Empire. The origin of the two Academies, and of the Medical Faculties of Moscow, are long since well enough known, but the foundation of some new faculties, and the modification of some others, for a general plan of medical studies, dates from the beginning of this century only; and, perhaps, before the first quarter will elapse, Tobolsk, in Siberia, and Kew, in the southern provinces, will be two new centers of instruction, for the too distant pupils of Asiatic or southern Russia. Such, at least, is the intent of the government; but, before new enterprises, it will probably first complete the work begun, and particularly at Dorpat and Abo. All these schools have the same rights and privileges, and they equally depend on the Minister of Public Instruction. The plan of the studies is the same every where, so that the leading influence will merely depend on the accessory advantages of the establishments, and the spirit of their professors. The scholastic course continues four years. The first year, the pupils follow the lectures of mineralogy, zoology, and anatomy; the second, comparative anatomy, botany, and chemistry; the third, the principles of pathology, therapeia, and surgery; and they are only *spectators* in clinical medicine and surgery; the fourth, therapeia, surgery, midwifery, medical law and police; and in this year, they are active in both the clinics. Mineralogy is insisted upon particularly, at the beginning of the course, as being a branch of knowledge in natural history, of the greatest interest to a country, where the metallic minerals are one of the first branches of public and private riches. All the schools are not equally furnished with books, museums, and materials for clinical pursuits. The best library is at Petersburgh, and there is preserved in the academy of sciences, the Anatomical Museum of Ruysch, of Amsterdam; at Petersburgh is also preserved in the Medico-Chirurgical Academy, many anatomical collections from England, by Cruickshank, Thomas, &c., and the microscopical one of Liberkin. Moscow too, has the advantage of possessing the famous collection of Loder, from Weimar, who is professor of anatomy there, and the collection is very rich in morbid anatomy. If Moscow is inferior to Petersburgh, in anatomical preparations, it has the advantage of possessing a *National Museum* of natural history, which is daily increased by voluntary donations, and that of possessing the greatest military hospital of the empire; where the number of the patients approaches nearly *fifteen hundred;* besides, five other civil hospitals, where the patients scarcely exceed the number of five hundred in each; and a naval one, of nearly one hundred. In the Memoirs of Military Surgery by

Baron Larrey, they are very well described. Petersburgh has also, a military, and a naval hospital, and a civil one; but they are not so full of patients, as those of Moscow. Besides, there are thirteen military hospitals, and eight naval, in different quarters of the empire; but they are not so useful to the other universities of the provincial hospitals, of which, each of the fifty-two provincial towns has one. Before the new institutions, the physicians, attached to the different ministers of the empire, were a kind of corporation, and they could examine pupils, who had studied the best way they could, and give nominations, particularly for the army and navy; but, since the improvements in medical instruction, their rights are nearly forgotten; and the public offices are filled by those of the academies, and the univerties. It is really worthy of consideration, that when in a country newly civilized, the lustre of public institutions eclipses the influence of the ministerial patronage, in more than one of the old civilized countries, on the contrary, Italy for example, the ministerial influence overpowers, more and more, every day, the formerly directing institutions of the country.

The titles which the pupils receive at the Russian Universities and Academies are as follows—1. *Candidatus;* this title which only requires the expence of five shellings, introduces to the praxis of the hospitals, and includes the pupil in the first of the fourteen classes, into which are distributed all those who have *places* throughout the empire. 2. *Medicus:* this title which requires only the expence of ten shellings, gives the right to practice medicine as well as surgery all over the country. 3. *Doctor Medicinæ,* this title which only requires twenty-five shellings of expence, gives other rights besides those before mentioned. 4. *Doctor Medicinæ et Chirurgiæ;* this title which requires only the expence of forty shellings gives further rights. For instance, the candidatus, if equal to a common officer of the army, the medicus to a captain, the doctor of medicine to a major, the doctor of medicine and chirurgery to a colonel; and this is to be considered not only in the employment of the army, but on any other occasion of public appearance, as in a military government like the Russian, the military gradations are naturally the scale and balance of society. But relatively to the division into *classes* which was mentioned, there are other considerations, as the number of years in the public service, &c. and the rank of the class is much more important than any other distinction to the real advantages of the individuals. Besides the *Doctors* after some years public service are entitled to the rank of *Noblemen,* to which every body aspires in a country, where the general mass of people is

divided into *Noblemen* and *Serfs*, and where all the privileges are in favour of the *nobility*, scarcely any, of the *peasantry*. The Russian pupils of the universities and academies are necessarily examined in Latin for their diplomas, and the thesis doctoralis is written in that language. Foreign Physicians are also thus examined if they wish to practice in the empire. The Russian language is not required, and the thesis which they had already presented to the universities, where they have obtained their degree, is admitted for the occasion; their expences are the same as above mentioned.

But foreigners or natives, who without the necessary degrees or without the preparatory study of the universities, would submit to be examined for practising, are not examined rigorously in Latin, but rather in their own languages (and such knowledge is not rare in a polyglottical country like Russia), but they are put in the class which they call *free practitioners*, and never can be ranked with regular pupils, nor receive public employments. Every year a list is published of all the persons entitled to practise in the empire, whatsoever may be their denomination.

Besides medicine and surgery, they are every where taught the veterinary art and pharmacy. There are three Professors for these branches at the Academy of Petersburgh and of Moscow; one only is to be found in the universities. They give but the two fifths degrees of *Candidatus* and *Medicus* in veterinary art, and of *Candidatus* and *Pharmacopola* in pharmacy. The expenses and privileges are the same as those of the analagous denomination amongst physicians and surgeons. We say physicians and surgeons as there is no other difference between surgeons and physicians in Russia, but the pursuit of the one branch rather than the other, and the title of doctor medicinæ et chirurgiæ is only a matter of name and privilege.

As degrees, suppose certain preparatory studies to admission to the academy and universities, these suppose in turn other preparatory studies—1. Of the Russian language, and of the Latin at least, for understanding and translating the ancient prose classics. 2. Of arithmetic, geometry, geography, history, and belles-lettres. But those coming from colleges (and one at least of such establishments called *Gymnasia*, exists necessarily in some provincial towns, besides some others which may be in their vicinity), are in general passed with the examination by presenting the certificates of their academical studies, and particularly if they are not *pensioners* of the Imperial Government, but have studied at their own expence. People of this kind are in general sons of the free part of the Russian population, which increases rapidly since the settlement there of so many foreign

families, and the daily emancipation of the peasantry. Sometimes the sons of the serfs are sent to college, and afterwards to the university by their Lord, but when they are graduated, they are obliged to serve their Lord six years as physicians, and then they get their liberty *by law*. When the son of some rich peasant is so educated, without the interference of the noblemen, they are obliged only to pay *by law* the equivalent of their contributions in work or money, after the different arrangements, as does any other peasant who wishes to exercise any profession of mechanism or trade, and this equivalent does not exceed *fifteen roubles* a year, or what they call *the loaf of sugar*, as this is just the price of fifteen pounds in Russia. This contribution, the noblemen are rather proud of receiving, as it shows the good state of their lands and the industry of their vassals.

In the colleges, the greater number of pupils are the sons of clergymen, and they are now flocking to the medical universities, and getting employment more than any other class, as their greater knowledge of classical literature renders them more fit for the purpose. They receive in general instruction from their fathers, and this kind of tuition seems to be preferable to that of the *primary schools*, which exist in each of the ten towns depending on each provincial town, and to any other which may be obtained by the Lancasterian spirit. It is not that we are hostile to the introduction of such a system of education, particularly amongst a people obliged to work hard for their masters, and to which the benevolent disposition of the reigning emperor sacrifices so much money, as may be seen from Dr. Hamel's work on this subject, who when sent by the government all over Europe for general knowledge spent three years in England; but the *paternal* care will be poorly replaced by the Lancasterian, even when *neutralized* with the good heart and spirit of a Pestalozzi.

Russia is not deficient in learned medical societies, journals, and circulating libraries. The Medico-Chirurgical Society of Moscow (of which all the members of the university are members *by right*) exists since 1805, and has published two volumes of its transactions, partly in Latin, and partly in Russian. The subjects that may interest foreigners are in Latin; the second volume may be consulted at the Medico-Chirurgical Society of London: the first is very scarce. At Charcow there is a Society of Sciences, medicine included: it has published a volume on the same plan, in which two articles of medicine appear. A journal is published in Russian by the Minister of Public Instruction, on the national education, of which medicine forms a

part. In 1792 there was a weekly medical journal in Russian. No periodical work existed for a long time afterwards, but from 1811 to 1817, a number appeared every two months, also in Russian; since that period, a German journal, on the plan of the Russian ones, is published. The Russian travellers, with whom we have spoken, give us to hope, that at their return a Russian journal will again be set on foot; and we may anticipate, that the name of Dr. Ivanoff will be brilliant there. Of all the circulating libraries, that of Plavilshikoff is the best. It was begun in 1820, and contains nearly all the works of anatomy, surgery, midwifery, pathology, practice of physic, pharmacy, regimen, &c. and other branches of medical studies, chemistry excepted. Zagorski on Anatomy, 2 vols., and Rush on Surgery, 3 vols., are regarded as *classics* for the courses of the universities and academies, &c. A biographical book appeared before this catalogue, in 1815, in five vols. where the number of works extends to 8,000, when in Plavilshikoff's catalogue 7,157 are only to be found; but, nevertheless, it is the best of all the catalogues, of which many others exist, the collection being more judicious. From this catalogue it appears that there are 273 works published in the Russian language, on medicine and surgery, of which 142 have been published at Petersburgh, 111 at Moscow, and 20 others at different provincial towns. In the preceding number, different newspapers, and other works, published in Latin and German, are not included. Of the above number (273) 115 are written originally in Russian, and the remainder are translations, or publications of anonymous writers. It is to be seen from it, that the proportion of medical books to the others, is nearly as 1 to 63; and therefore, the medical literature is not so advanced at present (at least in number of books) as the general literature. But as from the present list of medical officers it appears that there are about 4,000 practitioners, of whom two-thirds are pupils of national establishments, and others, foreigners or Russians educated abroad, it is to be hoped that the medical literature will soon equal, if not surpass any other branch. Some years ago, Moscow had only four little apothecaries' shops, now there are thirty-three splendid pharmacopæias; and the Government does all in its power to advance the progress of every thing which may be connected with medical studies and pursuits. Thus there is no taxation for foreign books at the frontiers; no taxation for any article of pharmacy—great facility to foreigners for establishment; new lights, and useful men, sought out from every part of the ancient and new world—and for the public health, not only the physicians of districts are paid by the Government, but every physician of a nobleman, every free

practitioner, are obliged to obey to the calls, *according to law*, of the public authorities, in cases of contagious diseases, or those suspected to be so.

What a difference in this country since Peter Bas was studying ship-building at Sardam, and Peter the Great how to fight battles in Ukrania! The *Emperor of Cabardienskey* is become the Emperor of all the Russias; of Swedish, Polish, Turkish, Persian, and American provinces, &c. and his armies have entered Milan and Paris!!! What may not happen in medicine, since a man (Frank), who had united German depth with Italian acuteness, went there to fix the only basis of a rational medicine, the Clinical Institution? But the progress of arms is not the progress of the mind! The progress of the human spirit requires something more than physical force and blind mechanism! Alexander is the friend of his people, and his ambition, the glory of civilizing them as Peter the Great had that of civilizing the nobility! But is the nobility friendly to the people? Will they really see with pleasure the *loaf of sugar* from physicians not crouching in their saloons, but attached to the army and navy, and travelling for scientifical pursuits? Will the nobility be equally disposed to reject the *loaf of sugar* from men of science after the sixth year, and *proclaim* him *a man*, who is *really a man*? It may be, it may not be. It is the same every where—the genius of the good combating evil, liberal light combating prejudices, and the philanthropical spirit of egotism! In fact, some worthy noblemen of Uthoria were proclaiming the liberty of their peasants, others were blaming and opposing the measures already taken, and those in consideration, in favour of the peasants!!!

CAPURON AND SMITH ON MEDICAL LAW EVIDENCE.*

THE discharge of the duties of LEGAL MEDICINE, brings the practitioner into a new and most important situation. There is not, in fact, another which more imperatively calls for a greater diversity of talent and acquirement. When summoned to a

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* La Médicine légales, relative à l'Art des Accouchemens; par J. Capuron, D. M., Professeur d'Accouchemens, &c. Un Vol. in 8vo. Paris. Chez Croullebois. Journal général de Médicine, Vol. LXXVII. Dec. 1821.

The Principles of Forensic Medicine; systematically arranged and applied to British Practice. By John Gordon Smith, M. D. 8vo. London, 1821.

patient, seized with an alarming attack, he makes rapid enquiries, yet, the symptoms are unaccountable, and he remains perplexed. With difficulty, suspicion of poison enters his mind, and he looks round on the family; their countenances, their characters, their relative circumstances are quickly brought under review, and tend still more to render difficult his diagnosis. Joined to this, his measures must be as prompt as the rapid workings of the poison; the knowledge of the remedy is not then to be sought for, or all is over with the patient. Nor is there less required, in the unfortunate issue of the case, for in exploring the evidences of poison in the corpse, the utmost skill is called for in anatomy, and in chemistry, and expertness in manipulations. It is such duties ably performed, that raise our profession to an exalted rank in the eyes of the world; that cause the vulgar, who are ever ready to exclaim against the inutility of medicine, to marvel at the mysterious power by which an atom of arsenic, mingled amidst a mass of confused ingesta, can still be detected. It does more: it impresses on the minds of assassins, who resort to poison, a salutary dread of the great impossibility of escaping discovery. But if the able or faulty discharge of such duties, contribute to exalt or degrade the profession in general, much more does it influence the fate of the individual practitioner. When cited to give public evidence, the eyes of the judge, and of the jury, are directed to him, on whom hangs the fate of the prisoner. How painful must it be to others to observe, so important a witness hesitating, and floundering with all the uncertainty of ignorance; and probably, teazed and perplexed by the queries of some subtle barrister, who triumphs over his doubts and perplexities. On the contrary, if he is skilled in his profession, and, of course, clear and decisive in his evidence, the barrister, with his little smattering of forensic medicine, is awed into respect by superior knowledge, and both judge and jury are ready to own their obligations to him, and to do justice to his merit. Such competent skill in legal medicine, however, is not to be attained without considerable labour. Here we have a goodly octavo, on that branch of it alone, which relates to midwifery, and a numerous list of other works might be given, all necessary to be studied. But, it is time we should make our readers acquainted with the contents of M. Capuron's book, which completes the valuable works which he has already published on midwifery.

The first part contains a clear and definitive account of the state of the legislative enactments in France, regarding pregnancy and parturition. In the second, we have discussions on a number

of questions, some of which are difficult of decision, and many altogether insoluble. Those regarding DEFLORATION and VIOLATION, which occur amongst the first, and which are treated of separately, approach each other in so many points, that the one cannot easily be spoken of, without at the same time referring to the other. The loss of virginity is so difficult to determine; the variety of circumstances, and of causes producing derangement in the organization of the female, are often so much without the pale of our investigation, that it is absolutely necessary to be extremely cautious before we venture an opinion on such matters. M. Capuron has omitted nothing, which might assist in extricating us from such embarassment; and, unlike some, who on such subjects revel in indecency, he has executed the task with becoming regard to modesty.

There is not, perhaps, in legal medicine, any question of more importance than that of PREGNANCY. Here the honour, the fortune, even the lives of females may be at stake. It may happen, that a woman accused and convicted of a crime, may declare herself with child, in order to stop the course of justice, and escape the punishment of the law. Sometimes it is required to pronounce, on the pregnancy of a girl under age, in order to confirm or disannul her marriage, with one who has eloped with her, or married her before she was of age. Sometimes a lady, against whom there is pending a suit of divorce, alledges her pregnancy, to prove her reconciliation with her husband; a circumstance, which requires the cessation of all judiciary proceedings, until the existence of pregnancy be determined, and the period at which it may have commenced. In fine, a female may, perhaps, be accused of forgery or concealment of a birth, of using incitements to abortion, or of infanticide. It is necessary then, to ascertain whether pregnancy may have existed or not. In such circumstances, who does not perceive the necessary connection, between medicine and jurisprudence.

The fourth and fifth questions, are employed on the subjects of SUPERFŒTATION and PARTURITION. On SURVIVORSHIP, where both mother and child perish in accouchement. This which forms the sixth question, regards the right of inheritence, for whichever of the two have given the last signs of life, must be regarded as the heir. On such trifles, do matters of importance, and serious law-suits, frequently depend.

The seventh enquiry regards the PROBABILITY OF LIFE, and contains all that is requisite, to enable us to discover if a child is likely to live; whether it be yet in the bosom of its mother, or brought into the world. He wisely rejects an opinion, which

has gained too much credit, that a seven months' child is more likely to live, than one which shall be born between the seventh and ninth months; considering with reason, that the nearer a child approaches to the term of nine months, the more likely is it to be endowed with what is requisite to maintain existence. So it is with other animals, and so must it be also with man. Reasoning in this manner, from the dictates of experience, and actuated by a sound philanthropy, the accoucheur will not rashly reject from the bosom of society, those unfortunate infants, whose organization has been deranged, by causes far beyond our scrutiny, whom nature in her freaks, (if we may dare to say so) has deprived of a member, or on whom she has bestowed a double or treble number. Such have often lived to a considerable age, contrary to the hope of cruel parents and relatives. M. Foderé in treating this subject, forgetting the usual dictates of his heart, has almost debarred from existence, these innocent victims of a capricious fortune.

The succeeding enquiries are on premature births, late births, on the symptoms which indicate the life or death of the fœtus in utero, on the exposure of a child, on concealment, forgery, and substitution, with regard to birth; also, on paternity, maternity, and filiation.

After describing the *innocent* causes, inducing ABORTION, or premature expulsion of the offspring of conception, our author proceeds to detail those *infamous* expedients, which wretched mothers employ to destroy the result of illicit love. In such cases, professional men are called to shew themselves worthy of the confidence reposed in them, by the courts of law; and, but too often, to mark out for justice, those whom there is reason to fear have been guilty of such criminal practices. In doing so, it is indispensable, to expose their guilt even to the minutest traces, or to efface all shadow of a doubt.

INFANTICIDE, is one of those which comes most frequently before a court of justice. This crime may be committed before, during, or after the birth of the child. M. Capuron here makes us acquainted with the medical substances, and the instruments employed to accomplish so base a purpose, and also describes the care necessary to be employed in examining the woman, and every thing which escapes from the uterus; lest we should confound an embryo, a well organized fruit of conception, with a blasted ovum, a coagulated mass, or any thing else connected with a false pregnancy. On infanticide, after the birth of the infant, he details the methods which may be used by the mother, to effect her purpose; methods which a diabolical imagination has invented, and at which human nature recoils with

horror. We turn from them, to consider the causes which may, innocently on the part of the mother, produce the death of the child. These are extreme weakness of the infant; and syncope, apoplexy, and convulsions of the mother. Amongst others is mentioned, omission of the ligature on the umbilical cord; but on this subject, the opinions of medical men are divided. Our author mentions, the chief authors, both ancient and modern, who have regarded the ligature as indispensable, or who have viewed the matter in an opposite light. He joins the latter class, being of opinion that the omission of the ligature, can never be considered as a cause of death. Yet, how frequently, we would remark, is the accoucheur sent for to stop a hæmorrhage from omission of the ligature, or imperfection in tying it: a hæmorrhage to which death may frequently be imputed. We must, however, leave the subject of infanticide, which is too fruitful in remarks for our limits, and proceed.

In the third part of the work, our author is occupied in instructing the practitioner how to discharge the duties of legal medicine, so far as regards the economy of parturition. In this division of the work, which regards la visite du fœtus, M. Capuron mentions, particularly, the precautions necessary in examining the female, and alludes to the method, by the touch, as exhibited in his Theoretical and Practical Course of Midmidwifery. He next presents us with rules and forms, to instruct the accoucheur how, properly, to arrange his observations in cases of legal medicine, and draw up the report to be laid before the tribunals. This is written from a laudable regard for the honor of the profession, for how painful is it to witness the inaccurate and inelegant productions of some medical men, which will not bear comparison, with those of a clerk in a police court. Too many viewing medicine in the light of a mere art or trade, if they can but acquire the certainly more useful and fundamental knowledge, affect a disregard of the light and elegant accomplishments of civilized life; forgetting that they belong to a profession, the distinguished characteristics of which, in every age, have been elegance of manners, and refinement of mind. It were well, if all the various schools of medicine, were to exact a course of study in philosophy and belles lettres, before they admitted any as candidates for the honor of a diploma. This has been done, as we have seen in Russia, (see p. 43 above) and it is also the case in our English, and in one, at least, of our Scots universities. By such means alone, can we hope, that one part of the profession shall be preserved from blushing for the other, and that the respectability of the whole body, shall be maintained in the opinion of the world.

THE neglected and degraded state of the science of LEGAL MEDICINE in this country seems at length to have attracted the notice of the profession, and it is but reasonable to expect that a short period of time will suffice to remove from us this opprobrium. Until the appearance of the present publication, there were no works sufficiently perfect or accessible, to give the medical student the means of making himself as fully informed as he ought to be, on a part of his profession so important to himself and to society. Dr. Male's Elements of Forensic Medicine, almost the only work of the kind worthy of notice, although as valuable as its limits would admit, was far too confined for the extent of the subject it treats of. Such being the case, a work which would bring together the detached parts of so extensive a subject, and present at one view to the English reader the results of the labours of foreign writers on this point, could not fail to prove highly acceptable to the profession, even had it been less perfectly performed than that which Dr. Smith has offered to the public. Nor is the utility of the work likely to be confined to our own profession, for it is equally calculated to afford important information to those whose office it is to assist in administering the laws of the country; and with this view the author has submitted it to the consideration of coroners, and magistrates, among whom we understand it has already extensively circulated.

Dr. Smith has more particularly devoted his attention in the work before us, to the first four classes into which the subjects embraced by FORENSIC MEDICINE may be divided. These classes are, 1. Those subjects which regard the extinction of human life; particularly by unusual or violent means. 2. Injuries done to the the person, not leading to the extinction of life. 3. Circumstances connected with the physical system, that disqualify for the discharge of civil offices, or the exercise of social functions. 4. Whatever regards the preservation of the public health.

The first of these classes is, beyond all doubt, the most common cause calling for the assistance of the physician, and the most important to the interests of society under ordinary circumstances, and for both of these reasons most imperiously demands the attention of those who make the science their study. It is doubtless, for the same reasons, that it is the part of forensic medicine most cultivated, most enriched by the labours of skilful men, and making the nearest approaches to that degree

of perfection which the nature of the subject admits. The consideration that our author's work is rather intended as a text book for those who make the science a study, than for a compendium of the knowledge we possess on all its branches, authorizes the course which he has adopted in confining himself to what is at once most common and most important. At the same time we cannot but regret that he should be compelled to restrict himself within these limits, to the neglect of one most interesting branch of the science; we mean medical police. This is, in fact, altogether unknown in this country, with the exception of some imperfect quarantine laws, and the occasional exertions of a few benevolent individuals in endeavouring to limit the progress of the contagious diseases, which sometimes so severely afflict our islands. We know that it has been said, that the regulations of medical police are incompatible with the genius of our country, and with the spirit of our laws, and that they can only be fully carried into execution in those countries where the executive power has an uncontrolled sway over the lives and properties of the subjects. But we are of opinion that the objection has no real foundation, and that our countrymen at large are too well informed, and have too much good sense to refuse to submit to regulations of which the advantages are universally admitted, and which have but one object in view,—the general good.

The body of the work is preceded by some general reflections on the DUTY of the physician, when called upon to assist in the elucidation of any of the points connected with the profession. The principal object of these is to recommend to the practitioner, such a previous study as will enable him to make himself acquainted with the most important points of medico-legal inquiries in general, and their probable bearings on individual cases. We cannot too strongly recommend the study to young practitioners: *The ability with which they may acquit themselves in a public court, may often be the first and leading step of their fortune and success.* Such a previous study can alone enable a young man to acquit himself of his important office with credit and satisfaction to himself, and may be the means of saving much inconvenience and misery to others. To sum up the whole in a few words, his immediate duty, when called before a tribunal, is to put the judges of the cause in full possession of circumstances which relates to the physical question (whatever it may be), as far as he himself is conscious of them.

In the first class of questions regarding the extinction of human life, the principal subdivisions are, 1. Of sudden death in the healthy state, including the inquiry into the reality of death,

and into sudden death, without cause of crimination. 2. Of death by personal agency or homicide, including poisoning suffocation, wounds and bruises. 3. Of death by spontaneous, agency or suicide. 4. Of infanticide, including criminal abortion and infanticide strictly so called. In the second class,—Those questions arising from injuries done to the person, not leading to the extinction of life, as mutilation, rape, &c. In the third.—Disqualifications for the discharge of social or civil functions, we find—1. Mental disqualifications. 2. Disqualifications strictly physical, including those for general purposes; those for military service; those for the matrimonial state. 3. Pretended disqualifications. 4. Miscellaneous questions, including, utero gestation, sexual ambiguity, personal identity.

In relation to the important and too frequently occurring subject of INFANTICIDE, Dr. Smith has with great propriety directed the attention of medical practitioners to the TEST originally proposed by Ploucquet, for the purpose of ascertaining from the state of the lungs, whether the child has or has not inspired after birth. The hydrostatic experiment has been known from the earliest periods as a means proposed for the decision of this question, but the important objections which have been made against its accuracy are well known to every one, although we agree with our author in thinking that their consequence has been exaggerated, and that the results of this experiment are more to be depended upon, than is generally supposed at the present day. But besides the variation of the specific gravity of the lungs, according as respiration has or has not been performed after birth. these organs are affected in another manner by the change of circulation which occurs at that period. Not only is their specific gravity diminished by the performance of respiration, but their absolute weight is also increased.

"The blood-vessels," says Professor Ploucquet, "in the fœtal lungs, being yet collapsed and compressed, admit but a small quantity of blood; but now (after respiration), being dilated, extended, and more free in the expanded lungs, they receive a greater quantity, are thereby further expanded, and acquire a larger diameter. This is a permanent change; so that, from the increased capacity of the vessels, a greater quantity of blood remains after death in the arteries—at least the smaller ones, but especially in the veins, than in the lungs that have not respired. Consequently the absolute weight of the lungs cannot but be increased."

This is the theory of the test in question, and as such is undoubtedly well founded, the question remains how far it accords with facts. From the personal observations of Ploucquet it

appeared, that the weight of the lungs of a full grown fœtus, which had never respired, was to that of its whole body as one to seventy; while in new born infants, after respiration had been established, it was increased as two to seventy, or as one to thirty-five; that is, absolutely doubled. Ploucquet was, however, aware that his experiments were too few to warrant the establishment of a rule from them, and observes, that it cannot be received as a certain proof, until after a great number of trials shall have been made, and their results accurately recorded." Dr. Smith says, that he expected to have been able to insert the result of some investigations of his own on this point; but they have not yet reached a satisfactory amount: and adds, "I may, perhaps, be excused for saying in the mean time, that as far as I have personally examined into the weight of the lungs, the result has preponderated in favour of the new test of Ploucquet. I hope shortly, however, to lay before the profession some details on the subject, on a scale that may better warrant conclusions.

It may be objected to the value of this test, that the same effect (the absolute increase of weight,) may be produced by other causes than the performance of respiration; such as disease of various kinds, inflammation, tubercles, &c. But it should be remembered that, on the one hand, such states of disease are readily discovered by attentive examination; and that, on the other, the absolute increase of weight would be by itself of no importance, unless an absolute diminution of specific gravity were also present. It seems, in fact, that though implicit reliance cannot be placed on the results of either of these tests individually employed, yet when combined, the evidence afforded by them amounts almost to certainty. Thus, though the floating of the lungs in water, or an increase in the weight of those organs, taken singly, might not warrant any positive conclusion, yet, if we find in any individual instance, that the lungs both float at the surface, and that their weight is augmented, the inference to be drawn from this fact is, that respiration has been performed.

We trust that Dr. Smith may prove successful in the appeal he has made to the practitioners of this country, for the purpose of inciting them to investigate, on a large scale, how far the test of Ploucquet merits our confidence. For the assistance of those who may feel disposed to collect and communicate information on this subject, he has subjoined two tables, including in methodical order all the circumstances necessary to be attended to in such inquiries.

In endeavouring to ascertain the reality of the occurrence of

DEATH, it is necessary to take into consideration several circumstances; as the phenomena attending on this state; certain diseases or conditions of the living body, which resemble death, and may be mistaken for it; certain experiments that have been recommended in order to ascertain the reality of death. It must be confessed that this is occasionally a question of more difficulty than might be at first supposed; and that the means of enabling us to form a decision, are for the most part very inadequate and imperfect. The methods proposed for this purpose are, as our author justly remarks, individually, altogether fallacious, while even the concurrence of them all will sometimes prove unsatisfactory. The pulsations of the heart, and the performance of respiration, are generally considered as indicative of the existence of life; and, indeed, so essential to it, as to cease only with its termination; but it cannot be doubted, that in certain states of the animal frame, circulation and respiration are more or less perfectly, sometimes altogether suspended, without the extinction of life being the consequence. In such instances we have no clue to guide our determinations, all is uncertainty and doubt. It has often appeared to us a singular and inexplicable circumstance, why in these cases the total suspension of these two functions, sometimes for a considerable period, should be compatible with the restoration of life and action; whilst under other circumstances, a temporary and inconsiderable interruption of either of them shall prove permanently fatal. Putrefaction is certainly the only proof of the occurrence of death, which can be considered as conclusive; every other circumstance, however strong as presumptive evidence, certainly affords no grounds for a positive evidence. The cessation of circulation and respiration, coldness and rigidity of limbs, taken separately, are of no importance; and even when combined, leave an opening (slight it may be granted,) for a doubt.

We must here conclude our imperfect notice of a work equally creditable to its author, and likely to be useful to those to whom it is presented. The view we have given of the subjects treated of, and the assurance that it displays talent and judgment, must stand in the room of more copious extracts, and more extended criticism.

WELLER AND TRAVERS

ON THE DISEASES OF THE EYE. *

Is it true that the Germans excel us in the treatment of the eye? Almost every work we open, and almost every journal we glance over, proclaim their boasted superiority, and talk degradingly of our English knowledge and our English practice. Now we are anxious to come at the facts of this superiority, if so it is;—to compare the knowledge and practice of each country, in order to discover and make up for our deficiency if it exist; and if not, to repel indignantly the insinuations against our character. The two works of M. Weller and Mr. Travers give us an excellent opportunity for such comparison, though they are not quite parallel cases,—the German work being confessedly a compilation, and the English one having the higher pretensions of experience and observation for its basis. The difference indeed in arrangement and manner is most striking: and here at least we boldly claim the palm for our able countryman, whose simplicity and distinctness form a very strong contrast to the pedantic stiffness, and endless and useless divisions of the German. Mr. Travers puts down in the plainest and most gentlemanly English *what he has seen, what he has done, and what he has thought;* while M. Weller contents himself with piecing together *what he has read.* Mr. Travers is a practical surgeon; M. Weller is a mere book-maker. He has however succeeded in making a good book of reference; though to those who possess Cooper's Dictionary, the Manuel of Weller will give but little additional knowledge, while the work of Mr. Travers is valuable from the accuracy and originality of its observations.

Another point, on which we cannot too highly praise Mr. Travers is, his pointed rejection of the countless farago of new coined terms, which the Germans and their imitators, now think indispensable to science. Many of Weller's

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* A Manual of the Diseases of the Human Eye intended for Surgeons commencing practice, from the best national and foreign works, and in particular those of Professor Beer, with the observations of Dr. Charles H. Weller, Berlin, 1819. Translated from the German, and illustrated with cases and observations, by G. C. Monteath, M. D. &c. &c. 2 vols. 8vo. Glasgow, 1821.

A Synopsis of the Diseases of the Eye and their Treatment, to which are prefixed a short Anatomical Description, and a Sketch of the Physiology of that Organ. By B. Travers, F.R.S. &c. 2d edit. 8vo. 1821.

names *our* English organs at least, can with the greatest difficulty pronounce, and our unlearned heads find it equally difficult to comprehend. As we conceive that we cannot render the profession a greater service, than do what we can to resist the present barbarous influx of German and French Greek into our practical books—(Mason Good may do as he pleases with his Sanscrit and Arabic), we shall here exhibit a few from Weller and others with unqualified reprobation; and we call on the profession to aid us in banishing them.

We begin our list with the new name for the surgery of the eye—*Ophthalmology*, and extend our vituperation to all the *ologies*:—*therapology, symptomatology, etiology, diagnology, pharmacology, prognology*, &c. &c. though we fear *pathology* is established beyond hope. We go on to *blepharopthalmitis, ophthalmia neonatorum* (in the name of wonder what is this?), *anchylops, tylosis, chilazion, ptosis, blepharosphasmus, lagophthalmus, symblepharon, trichiasis, dacryothysis, dacryops, dacryoadenitis, phlebitis* (quasi fleabites), *atresia, pacheablepharosis, conjunctivitis, keratokelé, synchysis, necrotomy, diplopia, leucitis, synechia, cirrophthalmia, dacryoblennorrhœa, ophthalmoblennorrhœa-syphilitico-scorbutico!!!*

Our pen almost refused to write this last sesquipedalian barbarism, and we shall not now take the trouble of putting down another; but we here give warning to all abettors of this conspiracy of name-coining against classical simplicity, that they shall not escape the full weight of our severest animadversions—no, not even Dr. George Monteath himself, whose good sense and extensive practical knowledge deserve a better fate, than to be thrown among this horde of barbarians.

But we must now go on to something practical:—

Purulent Ophthalmia in Infants begins in the conjunctiva palpebralis, to which it is often confined. According to Mr. Travers the cornea when the disease is mild is not endangered, unless it be neglected or exasperated by stimulants. A very slight haze of the cornea is the worst direct result of it. But how does it happen, we ask, that *a very slight haze of the cornea* should thus operate so unfavourably? This point has been well explained by Mr. Saunders and by Weller: If the inflammation have been too severe, and the secretion of puriform mucus considerable, then the cornea exfoliates, and is converted into a mass of matter, which at last bursts in the centre, either suddenly under severe pain, or slowly without pain, and the aqueous humour being now discharged, the iris comes to lie in the aperture. Should the ravages proceed further, the iris may even fall out of the eye, along with a greater or smaller

part of the vitreous humour, and complete colliquation of the latter ensue. The disease does not always stop here, for even in less destructive degrees of this affection, children often in consequence become consumptive. The cornea however will not pass into a sloughy state in every instance, in which during the course of this disease it is affected with opacity: on the contrary, opacity is frequently the sign of a commencing healthy action, and ought to be hailed as a happy omen. But the duskiness alluded to by Mr. Travers, which is so dangerous in its consequences, commences during the progressive state of the inflammation, which is, as Mr. Saunders has remarked, antecedent to any loss of substance, though a sure indication of it.

As to the SCARIFICATION of the inner surface of the conjunctiva lining the eyelids, recommended by Ware and Reil, no opinion is given, either by Mr. Travers or M. Weller. Dr. Monteath however speaks of it in high terms, as a method which he almost invariably practices. It is a point which can only be settled by experience: that of Mr. Saunders was decidedly at variance with what Dr. Monteath has observed. According to him, scarifications, as far as he has seen them employed in the active state of the inflammation, are certainly injurious; they have manifestly aggravated the symptoms, and he conceives that the infliction of mechanical injury on a part already actively inflamed, can scarcely be advantageous. His argument is plausible: *a similar practice does not obtain in surgery in the other parts of the body,*

Læsion of the frontal nerve in injuries of the scalp, is mentioned from Hippocrates downwards, as Mr. Travers informs us, among the occasional causes of AMAUROSIS. This affection may however vary in degree, from a weakness of sight, even to a complete amaurosis, in which the iris is immoveable, and the pupil either uncommonly dilated or contracted. Professor Beer ascribes the disease to the tension of the branches of the supra-orbitary nerve, *caused by a cicatrix*, and cures it by bold incisions down to the bone, close to the supra-orbitary foramen. Although we by no means doubt the success of this, we much doubt the explanation which is given, notwithstanding the great authority of Beer; but we leave the subject to the decision of our readers. Amaurosis, succeeding wounds of the eye-brows, may form, 1. By powerful laceration and extension of the larger branches of the superciliary nerve, in which case the amaurosis shews itself, either during the formation or soon after the completion of the cicatrix. 2. By actual laceration of the retina, and by displacement and dislocation of several other internal structures of the eye-ball. In both these cases the

blindness manifests itself immediately after the wound, in the first it appears more as a mere weakness of sight, while in the second it is always a perfect amaurosis. 3. By contusion and imperfect dilaceration of the branches of the superciliary nerve. Even here weakness of sight, more rarely perfect amaurosis, follows closely on the accident, but never so quickly as in the foregoing case. 4. By mere concussion of the eye-ball, and of its surrounding parts, and contusion, and tearing asunder of the superciliary nerve at the same time; here the amaurosis arises at the very moment of the accident.

These consequences are not confined to wounds only, for they are also produced in some instances, when the injury takes place in the lower region of the eye, and when the infra-orbitary nerve, or its branches are divided or contused. Any opinion, therefore, as to the event of such accidents, requires the greatest caution, and a prognosis should be declined till the extent of the injury has been completely ascertained.

If the wound is accompanied with great force, the amaurotic affection takes place in both eyes, from the communion of the anterior part of the brain. In such instances, when the weakness of sight increases,—if the eyes meanwhile be irritated by light,—if the patient complain of more continued head-ache,—and if his brain become affected, not only may a complete amaurosis take place, but the life of the patient may stand in danger.

After directions for the treatment of the patient, till good matter be formed, the necessity of having recourse to the above mentioned practice of Beer is again urged. But would there not be some difficulty in cutting across all the branches of the nerves? For in addition to that branch, which passes to the forehead through the superciliary notch, there is another which after going to the inner side of the orbit, also turns up in the same direction; so that for the complete division of all the branches, a very extensive incision down to the bone would be necessary.

Neither M. Weller nor Mr. Travers have been so particular as we could have wished, in distinguishing from incipient amaurosis, those various and anomalous affections of vision arising from disordered digestion. Mr. Travers in enumerating the symptoms of amaurosis, mentions spectra, like flakes of soot, or insects' wings; and sometimes bright, like a chain formed of small globules of quicksilver, which are usually the forerunners of violent headache. This he says, is an unpromising affection. It may be so, and often is so undoubtedly. But this statement requires considerable qualifications; for all these symptoms may

occur, when there is no plausible apprehension for amaurosis; and he ought to have said so distinctly. We know a young surgeon, who misled by this catalogue of symptoms, and never dreaming that they would apply to any thing but amaurosis, was thrown for several weeks into great alarm for his sight, till Mr. Wardrop quieted his mind, and soon cured him of headache, and the more distressing symptoms.

Even in recent times, diseases of the EXCRETORY ORGANS OF THE EYE, have been in this country, ignorantly confounded under one name, though in their nature, they present the greatest diversity, and, of course, require a corresponding variety of treatment. The term *fistula lachrymalis*, indeed, like that of scirrhus and of caries, seems to have been employed to conceal ignorance, or to stifle investigation, for it appears to have been employed in many instances, where no fistula existed. This confusion is now, fortunately, in a great measure dissipated, and, besides, the simple fistula, described by Desault, Pott, and Ware, as the only disease affecting these organs, inflammation, hernia, and dropsy of the lacrymal sac are particularised, and for each, a separate mode of treatment is employed.

According to Weller, HERNIA of the lachrymal sac, is known by a bean shaped, insensible swelling, natural in colour, and situated immediately under the internal canthus, from which, when pressed by the finger, a mucous fluid readily flows, either through the puncta lachrymalia, or through the nasal canal, (provided the puncta are closed by pressure, with the point of the finger), in consequence of which the tumour is emptied, but soon fills again. The disease consists in a relaxation and distension of the anterior wall of the lachrymal sac, and will be generally observed to be a consequence of inflammation of it. The cure, he says, is easily effected by the application of constant pressure, with graduated compresses and a suitable bandage, and moistening the compresses with astringents.

He describes DROPSY of the lachrymal sac again, as a bean shaped swelling in the nasal canthus, which becomes always larger, and at last discoloured; it is elastic and insensible; its contents cannot be emptied either through the puncta lacrymalia, or through the nasal canal; and when it has attained the size of a pigeon's egg, and threatens to burst, it causes a continual pressure on the nose, on the region of the eye-brow, and on the eye itself. The disease, evidently as the symptoms indicate, originates from obstruction of the caniculi lachrymales, though the nasal duct and the lachrymal sac, obstructed both above and below, still continues to secrete mucus The sac gradually

fills, and appears, according to circumstances, in form of a swelling, sometimes fluctuating, and sometimes hard and immoveable.

The TREATMENT in this instance, is not always attended with the same success as in hernia of the lachrymal sac, because it cannot be known, whether the obstruction in the nasal canal can be *completely* removed.

The tumour should be opened with a lancet-shaped knife, and the mucus in the sac should be removed by repeated syringing with warm water, by means of Anel's syringe. Afterwards the treatment is the same as in other circumstances of obstruction of the lachrymal sac. In this country, the nature and treatment of hernia and dropsy of the lachrymal sac, have not as yet been well understood. It has, indeed, been asserted on good authority, that in cases of hernia, though the sac is completely pervious, the disease has been treated by the stile, in the same manner as fistula lachrymalis; while dropsy of the sac has been mistaken for a cancerous tumour and treated accordingly. Mr. Travers, notwithstanding his very extensive experience, ingenuously says, that he is not practically acquainted with the effect of pressure upon the relaxed, or hernial lachrymal sac. In dropsy of the sac, he exposed the distended and transparent sac by dissection, and removed by the scissars the two anterior thirds of it. A process of suppuration which ensued, was for some time troublesome, but the wound at length healed soundly, and the complaint was cured.

On the best mode of remedying PERMANENT STRICTURE of the lachrymal canal, our authors are at variance with each other. Weller recommends the practice of gradual dilatation by the silver probe of Mejean, and afterwards by graduated catgut strings, at first, the size of the E violin string, afterwards, increased to that of the A; and lastly, to that of the D string. Mr. Travers objects to this as triffling, tedious, and painful; and prefers overcoming the obstruction in the duct at once, and afterwards placing a stile or tube in the newly formed passage. M. Dupuytren has had great success in Paris, by making an incision into the lachrymal canal, with a straight bistoury, and immediately afterwards introducing a golden canula, to supply the place of the natural passage. This canula, should be of the same length as the nasal duct, of a line, or a line and a half in diameter, and rather broader at the upper than at the lower part: it is to be slightly curved, so as to be readily adapted to the course of the canal. The upper margin is to be a little prominent on the external surface: it is destined to prevent the canula from falling into the nose, which would permit a relapse of the complaint; the lower extremity of the canula is to be cut

off obliquely, in order that one of its sides being shorter than the other, may not extend beyond the internal side, which terminates before the external side of the nasal canal.

We give the CASE of a lady, so treated by M. Dupuytren. At the internal angle of her left eye, was an opening of three lines in diameter; the edges lined by skin, which had acquired the organization peculiar to fistulous openings, giving passage to foreign bodies: the tears incessantly flowed down, and excoriated the skin of the cheek. At the inner angle of the other eye, there had existed for four years a small tumour; the size of which was greater in moist than in dry weather, and in the morning than in the evening. The tumour was easily evacuated by pressure, when a purulent mucous fluid, mixed with the tears, flowed out of the puncta lachrymalia; both nostrils were dry. Two months after the canulæ were passed into the lacrymal canal, the course of tears was re-established completely, and the patient felt so little inconvenience from their presence, that she could scarcely believe that they had been left behind after the operation.

Mr. Travers gives an unfavourable opinion of this practice, both from its not producing permanent benefit, and from the consequent irritation. He has, he tells us, had several opportunities of trying the plan since the publication of the first edition of his work, and has no reason since then, to alter his opinion.

He recommends a set of silver probes, of about five inches long, varying in size, flattened at one end, and slightly bulbous at the point; one of which to be passed three or four times from the puncta lachrymalia, through the sac and lachrymal canal at an interval, in each instance, of one or two days. He has found many cases of recent origin, and in which the stricture has no great degree of firmness, to be, by this plan, completely cured.

Mr. Travers acknowledges, that this method is always painful and often tedious, but he has found it on the whole more successful, *when cautiously used*, than several other plans which he has tried. The size of the probes should never be such as to distend the lachrymal canal; and no considerable pressure should be made with one that might be bent easily.

We cannot go into an elaborate consideration of IRITIS, a disease, which from having been unknown or disregarded, has now become the favourite object of study among those who pay particular regard to affections of the eye. At the present time, indeed, it seems to be the fashion to call every affection of the eye *iritis*, even though the IRIS is quite unaffected, or merely participates in the common inflammation of the organ. Both these errors

should be avoided. There can be no doubt, however, that the iris is more frequently the seat of inflammatory affection, than any part of the eye, except, perhaps, the conjunctiva. But a very nice discrimination, is not always necessary, for the simple antiphlogistic method, will in ordinary cases be attended with success in iritis, as well as in ophthalmia.

Mr. Travers claims the discovery of treating iritis with the free employment of mercury, and informs us, that the salutary effects of mercury in iritis was observed at the same time by Dr. Farre and himself at the London Infirmary for diseases of the Eye; and was first published in the second edition of Mr. Saunders' work, then in the press. "I am quite satisfied," he says, "that the treatment was original, notwithstanding all the attempts of the German scholars to convince us that at Vienna, and elsewhere, it was a matter *lippis et tonsoribus notum.* I shall further add, that I am unacquainted with any fact in medical surgery which ranks with this in point of importance; whether we consider the urgency or frequency of the occasion, or the indispensable necessity, and almost unerring efficacy of the remedy."

The German claims are supported on the grounds, that the second edition of Mr. Saunders' work bears the date of 1816, while Professor Beer's work, in the first volume of which the above practice is recommended, appeared at Vienna in 1813. Schmidt's treatise on secondary cataract and iritis, after operations for cataract, though so lately known in this country, was published much earlier.*

On these statements we pretend not to decide; but we know it is impossible for a gentleman of known honour like Mr. Travers, to allow such insinuations to pass without explanation. On our parts we promise to do him every justice; so far as truth and fact will bear us out. We are sure that there must be some mistake in the affair.

But we must stop. We are sorry that our limited space prevents our consideration of other important points which crowd upon our notice; but we promise not to lose sight of these, and shall take care to introduce all that we think practically useful in them, in a paper on the English and German medical schools, which is in preparation.

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* See Quarterly Journal, Vol. I. p. 65. for a Review of Schmidt on Iritis.

MAGENDIE, ROBERT, PETROZ, AND CHOMEL, ON THE SULPHATE OF QUININE.*

THE inquiries of medical men have frequently been directed to ascertain in what quality of cinchona its febrifuge power resided. It undoubtedly is bitter, and therefore bitters were tried in intermittents; these failing, recourse was had to aromatics and astringents, but neither would these do. It was next imagined that the virtue sought for must depend on a conjunction of these principles, and many combinations were tried of quassia, gentian, and sarsaparilla, with the whole tribe of aromatics and astringents; but all failed in supplanting the cinchona. Now, we do not wonder at such a result, since, if we may credit the French physicians, all the powers of this valuable remedy reside in CINCHONINE and QUININE, two of its constituent principles. The processes for obtaining these employed by Pelletier and Caventon, and Badolier, are now pretty well known, we shall therefore give that used by M. Robert, as it presents considerable advantages over any other.

PREPARATION OF THE SULPHATE OF QUININE.

After the cinchona roughly powdered, is exhausted of its substance by successive decoctions, in which two ounces of hydrochloric acid are used to every pound of cinchona,—finely powdered chalk is thrown into the mixed fluid, on which a brisk effervescence is produced. The chalk in this case acts only on the excess of hydrochloric acid; and does not affect the hydrochlorate of quinine, which remains suspended in the liquid. A copious precipitation then takes place of the red colouring matter, and the liquor is left pure and almost colourless. This is decanted, and

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* Journal de Physiologie experimentale, 1821.

Note sur le Sulphate de quinine; par M. Robert, pharmacien de l'Hotel-Dieu de Rouen.

De l'Emploi des Sulfates de quinine et de cinchonine dans le traitement des fièvres intermittentes, et de néuralgies périodiques; par M. PETROZ.

(Memoire lu à l'Academie des Sciences.)

Extrait du rapport fait par M. Hallé à l'Institut de France, sur deux Memoires l'un de M. PETROZ, l'autre de M. CHOMEL; l'un et l'autre sur l'emploi des sulfates de quinine et de cinchonine dans le traitement des fièvres intermittentes.

(Revue Medicale, 1821.)

Philadelphia Journal of the Medical and Physical Sciences, 1821.

treated with lime, in such a proportion, that it shall not be in excess; the precipitate produced, which has many of the characters of quinine, is dissolved in very dilute sulphuric acid, and a slight precipitation again occurs of sulphate of lime. The liquid, now highly coloured, and having generally an excess of acid, is again treated with chalk; and after the effervescence subsides, the whole is placed on the fire with animal carbon, in fine powder, added in the proportion of an ounce to the pound. It is boiled for several minutes, and afterwards filtered. While cooling, it deposits numerous crystals, which, to be purified, only require to be again dissolved in distilled water. It is useful to throw, two or three times successively, boiling water upon the filter, as that water, even after the third time, contains some of the sulphate of quinine. The fluid containing the dissolved sulphate of quinine, ought not to be put either into too shallow, or too deep a vessel. If it be put into one too shallow, the crystallization only takes place as the liquid evaporates, which is a tedious process; if, on the other hand, the vessel be too deep, it crystallizes with difficulty, and sometimes will not crystallize at all: and it often acquires an increase of colour from an ebullition, produced probably by a decomposition of the salt.

The animal carbon made use of in this process undergoes no preparation save that of being pulverized. It is procured from bones put into a tube formed of strong iron plates, and exposed to the heat of a furnace for five or six hours.

M. Robert has tried to obtain the hydrochlorate of quinine, directly from the clarified decoction, by evaporation; but he only succeeded once after very great precautions, a re-action in general taking place between the hydrochlorate of lime and of quinine.

Cases treated with Quinine and Cinchonine.

A lady about 40 years of age, was suddenly seized with a fever-fit, accompanied with complete insensibility and delirium, that continued six hours; after which she recovered her former freshness and vigour. M. Magendie on seeing her the following day, suspecting malignant fever, desired to be immediately informed, if the paroxysm returned, which happened the following morning. As it was clearly the fever so accurately described by Torti, he prescribed three ounces of the *syrup of quinine*, containing two grains of the *sulphate of quinine* to the ounce, a spoonful every three hours, while the fit lasted. This was most successful, as it not only prevented all return of the attack, but the patient remains free from complaint. M. Magendie prefers the alkaline extracts of cinchona *in small doses* to the bark in

substance, which seldom agrees well with the stomach of the patient.

The Countess of L——, of a nervous and dropsical constitution, was in the month of February last, seized with rather violent inflammation of the stomach. The first symptoms having been successfully combated by suitable remedies, but the stomach still retaining an extreme degree of irritability, the patient was so imprudent as to enter into a confined room, filled with the vapour of charcoal. Being seized immediately with giddiness, and a sense of suffocation, and while perspiring, she exposed herself to the external air which was cold and moist, the sudden impression of which removed the paroxysms, but in their stead created a benumbing sensation, extending throughout the whole division of the trifacial nerve of the right side. This disagreeable stupor changed next day into pain, which continued from two to three hours. During the remainder of the day and night she was tranquil, but the following day, at the same time in which the cold had first produced its disagreeable shock, a feeling of anxiety and of general illness arose; and to this paroxysms of pain succeeded, which became almost intolerable. Every topical application was useless—nor had soothing internal remedies any better success, although greatly varied. The violence of the third paroxysm was such, that it became imperatively necessary to have recourse to every means which might prevent any subsequent attack.

The difficulty, nay impossibility of getting a diseased stomach, still affected with inflammation, to bear the bark in substance, was very evident, yet was its use indicated by the regularity of the fits, and the decided character of the intermissions. M. Petroz had recourse to the sulphate of Quinine, two grains of which were given every two hours during the absence of the paroxysm. The approach of the fourth fit was retarded two hours: the pain was, to use the expression of the patient, common pain, and the stomach experienced no increase of irritation, at least no symptom indicating it. The same process was renewed in the intermission which succeeded.

The fifth attack was still shorter in duration and diminished in violence. Instead of the sixth there was a sensation of numbness in the part diseased. The seventh was entirely wanting; there was no symptom which could indicate that the treatment had increased the first complaint, or even retarded its cure.

Madame Q——, a young lady of very irritable constitution, keenly affected by the loss of her father, remained during several days in feelings of agony not to be decribed. When however these began to subside, the patient throughout the whole divi-

sion of the facial branch of the fifth pair of nerves was sensible of a pain, at first obtuse, but at the end of some days becoming acute and insupportable, and having a regular period of return and duration. Trifling topical means were used, the only one of which that had any effect was blistering, and even this soon ceased to afford relief, so that the disease continued and acquired a sort of habit which rendered it difficult of cure.

It was in fact more than a year after the first attack of the disease, before M. Petroz had an opportunity of seeing the patient. From continued suffering she had become so nervous, that the sudden impression of cool air, or of food too hot or too cold, nay even a lively affection of the mind, would bring on a paroxysm—there remained, however, no longer any regularity, either in the duration or intensity of the pain, nor even in the manner in which it affected her.

This tormenting malady was now treated with all the most celebrated antispasmodics, such as the extract of henbane, the root of valerian, and the oxide of zinc as advised by Dr. Meglin. The cinchona was next administered with a view of regulating the approach of the paroxysms, but in the moment when hopes were entertained of subduing the disease, the stomach began to reject the bark, and recourse was had to lotions of acetic ether applied to the seat of the complaint. The patient enjoyed considerable intervals of repose, and had given up all medicines, when a violent attack renewed all her former suffering. Encouraged by the success which the preceding case had presented to him, M. Petroz did not hesitate to employ the *sulphate of quinine*. The cure was rapid, the irritability of the stomach was not at all increased, and on the fourth day there remained no symptom of a disease, which had continued almost two years. Since the last five months she has remained free from complaint.

Miss B——, a dancer in the Royal Academy of Music, at the end of one of those fatiguing exertions inseparable from her profession, was affected with hæmaturia accompanied with acute pains in the loins, frequenting vomiting, and fever. The state of the tongue, and the pain excited on pressing the abdomen, indicated a strong disposition to inflammation in that quarter. Every means of stopping its progress were employed, general and local bleeding, the tepid bath, and antiphlogistic regimen, the most absolute rest being also enjoined, and in a few days almost all the inflammatory symptoms disappeared.

Every thing seemed to indicate recovery, when on the eleventh night she was seized with symptoms of a different nature.

The description which she gave of these next day to M. Petroz, left him in doubt of the real character of the complaint. The intermission having been unattended with any affection whatever—he waited the approach of the second attack to determine from it the nature of the first. About midnight the patient complained of a slight chillness, which proceeding from the inferior extremities gradually pervaded the whole body. The pulse preserved its usual rate, but became small and contracted —the respiration was slow and labouring. The patient, who could scarcely speak, said that she felt the utmost torment in drawing a little air into the chest; from time to time she experienced violent and painful constriction, her face and her features became pale. To these were soon added the usual symptoms of the cold and hot stages of an ague fit, but in so violent a degree as to evince, that the disease was of the order of malignant intermittents. The *sulphate of quinine* was administered at first with much caution, on account of the previous inflammatory affection; but none of the bad consequences occurring which were dreaded, the quantity of the medicine was increased to the amount of twenty-four grains in eighteen hours, and the whole train of symptoms was entirely subdued. The sulphate was continued for several days in slight doses, as a precautionary measure. From that moment the convalescence from the fever commenced, and recovery from the first disease did not appear in the least retarded.

In one of the numerous CASES which occurred to M. Chomel, the sulphate of quinine, administered between the third and fourth paroxysm, only served to diminish the violence of the latter; but the fever terminated, although there was no more of the medicine given. Of course the influence of the remedy appeared to extend beyond the fit which immediately followed its administration, and completed its effect in less than two periods of disease. In another CASE an example was afforded of an attack of cephalalgia, which followed the cessation of the fever. This affection was relieved by one bleeding from the foot, and cured by a second, without my relapse of the fever.

The two following CASES present us with instances, in the first of which, after a violent return of the fever, the *cinchona was rejected by vomiting, yet the sulphate of quinine did not occasion the slightest nausea*—in the second, which was a quotidian, complicated with chronic pneumonia, that had resisted doses of the sulphate of quinine increased from eight to sixteen, and from sixteen to twenty grains, and only yielded to a dose of thirty-six grains; the bark in powder being given, none of the sulphate

being left, such a diarrhœa was occasioned as obliged it to be given up. The sulphate being afterwards administered produced no such effect—there was no return of the fever, nor did the pneumonic affection, which remained uncured, appear at all increased by it. In three succeeding CASES the *sulphate of cinchonine* was employed instead of that of quinine. Similar success was obtained, although M. Chomel believes its action less powerful, and that it requires to be given in a larger dose.

In two other CASES the fever was successfully treated with the *vapour bath*, although it had appeared to fail in a former instance. In these however the cure appeared complete, although one of the patients affected with a quotidian had previously taken bark, in doses of six drams, without effect. The patient was put into the vapour, a quarter of an hour before the period of the fit; he remained about thirty-five minutes, and the paroxysm was averted. In one CASE, the bath not having been prepared in time, the patient was put into the vapour, when the shivering had already commenced—the shivering ceased, and the paroxysm was cut short. It is to be observed with regard to this last patient, that in spite of the care taken in getting the bath, to avoid exposure to cold—the first trials were succeeded by a slight sense of chillness, not followed however by heat or perspiration. After the sixth bath there was no occurrence of this affection, and the patient conceiving himself cured, left the hospital.

These trials of the vapour-bath, as recommended by Dr. Lettsom, are important. Their employment is founded on the observation, that to prevent the cold stage of intermittents, is often equivalent to preventing a renewal of the fit. In having recourse to this remedy we ought to produce and maintain the perspiration, until the period of the cold stage has elapsed. It appears to act in the same manner, as the warm drinks usually prescribed, but with more power.—An inflammatory disposition and congestion of the blood in the head have been pointed out, as counter-indications to the use of the warm or vapour-bath.

SUPPOSED RATIONALE OF EFFECTS.

The observations on the efficacy of the sulphates of quinine and of cinchonine are increasing every day, and it will soon, says M. Petroz, be put beyond doubt, that it is the action of these alkalies from which the febrifuge power of the cinchona arises. He has not yet seen it fail, whilst in the preceding cases, two are given, in which the disease not only showed a

manifest tendency to recur, but even to resist the bark given in substance.

In those painful affections of the nerves of face, which almost constantly assume the form of a regular intermittent—it has been thought requisite to administer the bark before the employment of antispasmodics. Does this necessity, in most cases indispensable, arise from an extreme sensibility of the whole system, or of the alimentary canal alone? Several cases of neuralgic affections have occurred without this disposition, which have been cured solely by the use of cinchonine. The two cases which have just been given, present this peculiarity, that in the first, the stomach still suffering from the consequences of inflammation could not have born a dose of the bark, in substance sufficient to have stopped the approach of paroxysms so violent; and in the second, the trials made with bark in powder were fruitless, as the stomach rejected them. In the last case where the symptoms of malignant intermittent, were accompanied with other alarming complaints—how large a quantity of the powder would it not have required, to have equalled the effect produced by the sulphate of quinine?

From these and other cases, the following conclusions are deduced;—that the sulphates of quinine and of cinchonine contain all the virtues of the bark, in stopping the course of intermittents;—that the sulphates being *soluble*, do not derange the digestive powers in the same manner as the bark itself containing the woody part, the indigestibility of which, it is probable, often prevents the administration of the cinchona in doses sufficient to obtain the requisite effects;—that the loading with bark a stomach unable to digest it, may be productive of serious affections;—that the sulphates of quinine and cinchonine, can easily be made adequate to any determinate dose of the cinchona, and that in urgent cases this dose can be carried as far as is necessary, without any great inconvenience;—that the quantity of quinine and of conchonine contained in any one kind of cinchona, is the test of the comparative virtue of the different species;—that the absence of these alkalies in vegetables, which have been proposed as substitutes for cinchona, shows the little confidence which ought to be placed in them; while those in which these alkalies are found may supplant the cinchona.

The experiments recently made by MM. Robiquet and Petroz, jun. on the bark of the *carapa*, which has been known in some countries of America to cure agues, which had defied the cinchona—come in aid of this last assertion; for MM. Robiquet and Petroz have found in that bark an alkali analagous to quinine: whence it results that the alarm enter-

tained as to a scarcity of cinchona, on account of the destruction of the trees, ought to yield to the hope of seeing the number of febrifuge remedies increased, without being obliged to wait for the discovery of their virtues, on a tedious and doubtful experience.

The Memoir of M. Chomel confirms all the results which he had formerly announced. It establishes the innocence of the sulphates of quinine and of cinchonine, in doses adequate to the subversion of fever;—it points out that the dose must be increased when we use the cinchonine;—it shews that the disadvantages attending the bark administered in substance, in doses sufficient to check fever, have not yet been observed in the use of the sulphates — a result which may be owing to the very small bulk of a powerful dose, and, perhaps, also to the liberation of the quinine and conchonine from other elemental substances, with which they are conjoined in the bark.

Notwithstanding, however, the evident innocence of these sulphates, in the cases detailed in the Memoirs of MM. Petroz and Chomel, as well as in those of many other physicians, it appears somewhat improbable that substances of so powerful a nature as these two alkalies, and of so intense a bitter, should in no case produce any marked inconvenience. It remains therefore to ascertain how far they are innocent, both as it regards the dose and the state of the patient, and what inconveniences may arise from their abuse, for we have but an imperfect knowledge of a remedy, when we are acquainted only with its advantages. We know, continues M. Halle, not of ourselves, but from physicians worthy of credit, that the *sulphate of quinine* given to a child with success in an intermittent, *has been followed by spasmodic affections, which have created the presumption that it may be productive of mischief.* This observation is not sufficiently established to be stated with confidence, it is made solely with a view of inviting the profession to turn their attention to this important point.

The fears of M. Hallé on this subject are confirmed by MM. Larrey, Duponchel, Emery, and Heller, who have all communicated to the Société Médicale d'Emulation, facts which tend to justify so reasonable an apprehension of danger.

OMODEI

ON THE EPIDEMIC OF LOMBARDY.*

WE can say little new upon epidemics and contagion. The subject has been absolutely written down, and is become quite trite and commonplace. But it is still an important one, and will always interest. From the celebrated epidemic of Athens, so eloquently recorded by Thucydides, up to the last published *brochure* sur la fiévre jaune, an anxiety, both general and individual, has been as often renewed, as epidemics have renewed their baleful ravages. The epidemic of Lombardy, which raged in 1817-18, adds another to our former catalogue, and we think its history of importance, chiefiy as it affords a comparison with that of other epidemics. From the perusal of this long paper of M. Omodei, which, by the way, is only half of what he promises: it is not difficult to see, that its spirit is very similar to, "Cenno sull' Oftalmia di Egitto e sulla sua propagazione in Italia," the success of which, all over Italy and France, and the high praise it received from most of the medical journals augurs well for the present performance.

In fact, if in the first, the facts were well separated from hypothesis, here, the author has made the most happy efforts for reducing to general facts, every thing previously known or pretended to be so. For the present, we shall content ourselves with a condensed outline of his description of the disease, its varieties, complications, and termination.

The disease showed in its course, the usual periods of commencement, exacerbation, crisis, and decline, common to acute febrile diseases, and particularly to the contagious ones. As soon as the patient was attacked, he felt either immediately, or some days after, that weakness and uneasiness—those rigors in the back and extremities, with which fever is commonly accompanied. These symptoms were followed by an extraordinary heaviness of the head; a sensation of painful stretching in the back, loins, and extremities; of compressing pain on the stomach, in general, accompanied by giddiness, nausea, and sometimes,

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* Prospetto, nosografico-statistico-comparativo della *febbre petecchiale* che ha regnata epidemicamente nella Lombardia, nel 1817-18, ossia, Commentaria sul governo politico-medico di questo morbo &c. con, 22 tavole. Dell' Editore. Annali universali di Medicina, compilati dal Sign. Dr. Annib. Omodei, vol. xvii, 1821, Miiano.

even vomiting of food, or bilious greenish and yellow matter,—with dryness of the throat and nostrils, oppression and weight on the thorax, with the pulse frequent and strong, flushed face, heat equal all the over body, thirst, anxiety,&c. Every thing, indeed seemed to announce a simple inflammatory fever; except that the eyes, from the first attack, were rather glazed, and the conjunctiva and eye-lids of a reddish cast; which, with the vascular sub-cutaneous swelling, characterized in such a manner the physiognomy of the patient, that an exercised practitioner might have foretold, from the face alone, the nature of the morbid process.

Sometimes, this particular physiognomy could be observed even before the formation of the fever, and it never abandoned the patient, notwithstanding, many strange variations during the progress of the disease. Meanwhile, the redness of the eyes was always increasing, and with it heaviness of the head, numbness of the limbs, inertia, restlessness, anxiety, and want of sleep. Fear and pusillanimity, at the first attack of the disease, appeared only in few; and in general, the mind was no more troubled than in common cases of fever. The pulse was always full and frequent, sometimes depressed, never weak; the throat was swelled, the tongue loaded, the thirst troublesome, and the urine scanty and reddish. On the fourth day, after an evident evening exacerbation, preceded by remission in the morning, eruptions usually broke out on the skin, particularly on the breast, neck, and back, and all the parts most defended from the air. Sometimes, plain, reddish, circumscribed spots; sometimes, little *papulæ*, similar to the sparsest miliary ones,—occasionally so confluent, and raised above the surface, as to imitate a kind of nettle rash. Sometimes the eruption was so sparse, deep, and copious, as to give to the skin a marbled appearance; and sometimes, it was necessary to look at it obliquely and against the light to discover it. More than once there was no visible eruption. In general, all these variations, had not the least influence on the degree of the other symptoms, and the slight remission on the fourth day, was common to every case, whatever was the period or the quality of the eruptions, or even without any eruptions at all.

The disease advanced thus till the eighth day, when a new febrile exacerbation, preceded by some hours of illusory decline, increased the former morbid phenomena, except the catarrhal symptoms, which frequently became milder, but sometimes remained the same, particularly when the mind was not much affected. The inertia was then converted into a real incapacity of any voluntary movement, and the patient lay motionless. Few

retained the faculty of changing place at this period, and this circumstance was always favourable. The heaviness of the head and the stupor of the mind, were now degenerating into a real coma with delirium. The skin dry and burning; the tongue white, red, and black, and incapable of motion; the pulse slower and depressed, the urine clearer and paler, the stools more fluid and frequent, deglutition more difficult and nearly stopped. Besides tremor, subsultus tendinum, hickcup, convulsions, and the abdomen, which could bear compression the first week, became all at once swelled, and painful to the touch, so that the patient was half awaked by it, and shewed frequently on the face the muscular contraction called risus sardonicus. The touch, taste, and smell, were in general entirely destroyed; the sight, and hearing, were very much weakened. Of all the faculties, the memory was the most impaired.

A new spontaneous exacerbation of heat, fever, and nervous perturbation, appeared about the eleventh day; diminished the next, and this being reproduced on the thirteenth or fourteenth, brought the patient (at that period insensible) to the tomb; or by a sudden change restored him to health, as one roused from a deep lethargy. In most cases, this sudden crisis was preceded by a copious and equal perspiration, and softness of the mucous membrane, which covers the nostrils, the throat, the trachea, the lungs, &c. and thus it happened, that the thick and blackish mucosities, which on the first cavities were even visible, were easily detached, and spit up. At other times, the crisis was effected by copious urine, full of sediment, or by slimy fœtid stools; at other times by hæmorrhage, particularly from the nose. But most frequently, the disease decreased without any sensible change in the secretions or excretions of the skin, kidneys, bowels, &c. at least, to such a degree, and of such a quality, that any proportion could be established between them, and so rapid a diminution of all the morbid appearances. A very few cases finished by a gangrenous decubitus over the os sacrum or the extremities. Swelled parotids were never a good omen.

The disease, however, did not always advance in this regular way. Anomalies and complications, amongst which inflammation of the brain, lungs, bowels, and liver, were the most common, occurred more than once, for which, neither the condition of the patient, the influence of the air, nor other circumstances could sufficiently account. But, as it happens in the small-pox, which in the same family, is confluent in one, and mild in another, so was it often the case in this—(how shall we call it?)—*petechial fever*. In the work before us, it is called petechial fever, after the author balanced for a moment, between

—" *Segni, petecchie, pesticchie, lenticule, peticule, morbus punc-ticularis, morbilli, morbus castrensis seu militaris, febris militaris, lenticularis, peticularis, synochus, febris ardens, cephalalgia epi-demica, languor pannonicus, lues pannonica, morbus hungaricus, febris pestilens privata, febris culicaris, vermis cerebri, febris stygmatica, febris petechialis, pseudo pestis, febris purpurata, febris pestilens, peste Europea, purpura contagiosa, febre noso-comiale, navale, concerale, castrense, e peste bellica, febre epide-mica, contagiosa, pestilente,*" and .. .. .. " and *typhus*" *!!!* An eminent man of antiquity said, " Corruptissimæ Reipublicæ plurimæ leges !" We should say in the same way :—" Corrup-tissimæ Medicinæ plurima nomina !"

The TREATMENT of the PETECHIAL FEVER, is announced in a chapter of that part of the work, not yet published, which we shall take up as soon as it comes to hand. His *Tabellæ*, twenty-two in number, are very well executed, but neither new in form, nor in application. Altogether, the work is more a general treatise on typhus fever, or rather on contagious diseases, than on the Lombardy epidemic; but we have lately discussed the general question so copiously, that we have here confined our-selves to the facts which came under the author's observation: such are always worth volumes of speculation, however ingenious, or however new.

We expected to have been able to give in this place a com-parison of the Epidemic of Lombardy with that of Andalusia, but the article has not come to hand in time. Perhaps, if we can make it brief enough, we shall give it in our next. Quid utile, id breve, is the maxim which we wish to follow.

Retrospective Review.

ALLAN BURNS.

SURGICAL ANATOMY OF THE HEAD AND NECK.*

WHY is this valuable work out of print? The able author indeed is no more; but his no less able brother,† could well superintend a new edition, which is much called for, particularly in the London schools, where the yearly eulogiums pronounced on it by Mr. Abernethy, and other eminent lecturers, make us feel something like disappointment, that it cannot, at any price, be now procured. But notwithstanding the demand, and the high prices offered for copies, ‡ we cannot learn that it is likely to be reprinted; and we therefore think, that we could not select for the commencement of our RETROSPECTS, a work of greater interest—at least, to such of our readers as cannot procure the original; and to such as possess it, our abstract may save time in consulting.

We knew Allan Burns well, and a more eloquent and zealous teacher—a more skilful and accurate anatomist—or a more ingenious and intrepid operator—we never knew. He actually fell a martyr to his enthusiasm in his profession. He seldom ever left the dissecting-room from morning till night; and even after his unwearied researches in morbid anatomy had induced disease, and alarmingly emaciated his frame, he could scarcely be torn from his favourite pursuit to breathe the air, so indispensable to restore him. He was not to be restored; he soon sunk—and he could not but sink—under such exertions, which were chiefly made, if we mistake not, in procuring the interesting materials of this very work—one of the best productions of the

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* Observations on the Surgical Anatomy of the Head and Neck. By Allan Burns, Member of the Royal College of Surgeons, London, and Lecturer on Anatomy and Surgery, Glasgow. 8vo. Edinburgh, 1811. 12s.

† John Burns, C. M. Regius Professor of Surgery, Glasgow, and author of the Principles of Midwifery.

‡ Our publisher was this very day offered two guineas for a copy.

rising medical school of Glasgow.*—But a truce to prefacing, we must go on to our task of creaming the *utiliora* of the book.

The design of the work † is to supply, in some degree, what every student feels the want of—a combined view of the whole anatomy of a particular part; the cheek, for example—beginning at the skin, and going inwards to the bone. To give such a view, in short, of the parts of the cheek, or the mouth, or the throat, as they really exist in life, that the young surgeon in

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* As some, we think, may like to see a comparison of the two medical schools of Scotland, we have drawn up the following contrasted catalogue of the several Professors and Lecturers in each.

EDINBURGH.	GLASGOW.
University.	*University.*
Anatomy and Surgery...Dr. Monro.	Anatomy...Dr. Jeffrey.
Clinical Surgery...Mr. James Russell.	Surgery...Mr. John Burns.
Military Surgery...Mr. John Thomson.	Theory & Practice of Physic...Dr. Freer.
Practice of Physic...Dr. James Home.	Clinical Medicine...Dr. T. Thomson.
Theory of Physic...Dr. Duncan, junior, and Dr. Alison.	Materia Medica...Dr. R. Millar.
Materia Medica...Dr. Duncan, junior.	Midwifery...Mr. Towers.
Midwifery...Dr. James Hamilton, jun.	Chemistry...Dr. T. Thomson.
Chemistry...Dr. Hope.	Botany...Dr. Hooker.
Botany...Dr. Graham.	Natural History...Dr. L. Muirhead.
Natural History...Mr. Jameson.	
Medical Jurisprudence.. Dr. Alison.	*Andersonian Institution.*
	Anatomy...Mr. William Mackenzie.
Private.	Chemistry...Dr. Ure.
Anatomy and Surgery. Mr. Fyfe. / Dr. Barclay. / Mr. Allan. / Mr. Liston. / Mr. Lizars.	Pharmacy...Dr. Ure.
Midwifery...Dr. Thatcher.	Botany...Dr. Cumin.
Theory and Practice of Medicine. Dr. H. Dewar. / Dr. Saunders.	*Private.*
Chemistry. Dr. H. Dewar. / Dr. Murray. / Dr. A. Fyfe. / Mr. Denchar.	Anatomy and Surgery...Dr. G. Monteath.
	Theo. & Prac. of Med...Mr. Mackenzie.
	Forensic Medicine...Mr. Armour.
	Midwifery. Mr. R. Ilosie. / Mr. Armour.
	Mineralogy...Dr. W. Cooper.
	——— ? Dr. Kennedy.
	——— ? Dr. Reid.

We shall feel obliged for any corrections or additions to our list of Private Lecturers, or for accounts of any new improvements in either of these two medical schools. When even Russia is now improving upon former methods of medical instruction, we expect our northern neighbours will, at least, keep pace.

† For Scarpa's opinion of it, see Quarterly Journal of Foreign Medicine and Surgery, Vol. I. p. 33.

operating on the cheek, or the mouth, or the throat, may know what skin, fascia, muscles, nerves, vessels, or glands, lie in the way of his knife, and may accordingly know what precautions to take, and what means to employ. This important knowledge, every body is aware, cannot be obtained by first studying the bones, then the muscles, the nerves, and so on, in separate systems, as is the regular practice in the schools; and of course the young surgeon is often greatly puzzled, even in simple cases, and where he knows the anatomy of the *separate* parts accurately, because he has not learned *the exact state and position of the muscles, blood-vessels, and glands, when combined and in situ naturæ.* This was the method which Allan Burns adopted in his lectures, and though, as he had so much to anticipate, it was occasionally difficult for him to make himself clearly understood by the mere beginner, yet he thus gave an interest and a spirit to the drier parts of the subject, which, on the usual plan, would have been impossible.

Besides the common integuments and the platysma myoides, the neck and throat is covered with a thin, but strong fascia or aponeurosis, which is of importance to be considered in cases of tumour, ulcers, operations, &c. The neck is therefore furnished with a double sheath, which also, by sending off processes, like the falx from the dura mater,—sheathes the several muscles—some of them so strongly, as to resist the efforts of the finger to push through it.

The sterno-hyoid, and the thyroid muscles co-operate with this fascia of the neck, *to prevent the gravitation of the air on the wind pipe.* CASE: A gentleman of twenty-five years of age, had had severe chincough at the age of three; the sequelæ of which, were difficulty of breathing, with fulness and tension above the sternum: the swelling at length burst, and a lymphatic substance came away, leaving the trachea, when the sore healed, without any covering but skin. In breathing, the pressure of the air here was very marked, forming a hollow at the upper part of the sternum, and producing a wheezing sound by the air passing along the compressed trachea. Might not a piece of leather fixed with adhesive plaster, in the act of expiration, and prevented from starting at the edges by a solution of sealing wax in alcohol, as recommended by Mr. Abernethy, have done good?

The THYMUS GLAND in scrophulous children, is apt to swell, and when it does so, it occasions most serious uneasiness; for the sternum, fascia, and muscles bind it down, and push it backwards upon the trachea, and the subclavian vein, producing dyspnœa, and interrupting the entrance of the chyle into

the heart; inducing also enlargement of the mesenteric glands; and at last death, from starvation and suffocation. Neither the internal exhibition of burnt sponge, muriate of lime, nor alkalis; nor repeated blisters and continued friction, were found successful. Would it be prudent in extreme cases, to extirpate the diseased gland, cautiously avoiding injury of the large vessels, and commanding hæmorrhage by the sponge? Inflammation is not to be dreaded, in consequence of the emaciation always present.

The enlargement of the CONGLOBATE GLANDS, which lie between the two plates of fascia, is distinguished by the absence of alarming and suffocating dyspnœa, though it does produce a slight difficulty of breathing. As this sort of tumour is exterior to the deep fascia and muscles, and not connected with any vessel or nerve of importance, it may be safely extirpated, and life, when in danger, may thus be saved.—Why, we ask, has Mr. S. Cooper omitted these useful observations in his excellent dictionary?

An obvious and practically useful distinction of TUMOURS of the neck, is into *those covered by fascia and those not covered by it.* The latter can easily, by management, be drawn out with the finger and thumb. Their extirpation is at first easy, but if allowed to remain, they work deeper, and by pressure, often though not always, produce absorption of the parts beneath them; the parotid gland for example. Tumours called WENS, often arise from the subcutaneous lymphatic glands. They contain few blood vessels or nerves, and are indolent, half insensible, and suppurate. They generally go on enlarging, but sometimes die and slough off. Sir A. Cooper extirpated one bounded by the zygoma, the lower angle of the jaw, the lobe of the ear, and the fascial artery. However large the tumours, the operation is simple. No arteries need be tied in such cases, but bleeding from varicose veins, is sometimes troublesome. When the tumour is small, it should be wrenched away; for this plan, if it is situated over the parotid, will save that gland from injury, and prevent hæmorrhage. Tumours below the fascia, are the most common and most difficult to manage; for they are so firmly bound down by the fascia, as not to protrude till they be greatly enlarged, and they are more intimately connected with the deep-seated parts, than is indicated by their small and regular exterior. They, of course, produce a much greater effect on breathing and swallowing, than from their *apparent* size could have been expected. Even simple tumours about the neck, when they do not yield to medicine, ought to be extirpated before they enlarge and root themselves among

nerves and blood vessels, among which the surgeon could not attempt to cut, without betraying the grossest ignorance.

None of the DIVISIONS OF TUMOURS hitherto proposed, have been of much use in practice. They might be well divided into such as resemble, and such as differ in texture from the part where they are formed. The first sort are indolent, and not prone to inflame or ulcerate, except by improper treatment; the second are prone to inflame, to ulcerate, and to form sphacelus, and fungus. Mr. John Bell maintains, but erroneously, that every tumour is produced from an excess of healthy nutrition; an opinion which can only lead to pernicious procrastination,—the worst possible error in cases of tumour. Mr. Abernethy's arrangement of tumours by their textures, is just enough; but unfortunately, the texture can seldon be discovered except by dissection.

When a tumour forms behind the root of the sterno mastoid muscle, its extirpation is hazardous; for by raising its sternal end, we bring into view the nervus vagus, lying on the subclavian artery, almost directly behind the sternal end of the clavicle; and opposite this nerve, but behind the artery, is the inferior cervical ganglion of the great sympathetic. On the left side, the artery is near the thoracic duct. We ought not to tie this artery nearer to the heart, than the scaleni muscles. *Timidity is not the character of modern surgeons; but knowledge, prudence, and caution, are as requisite as boldness.*

Simple tumours are often confounded with aneurism, from being situated near, or over an artery. A CASE of such mistake is given, in which a swelled gland, behind the left clavicle, was supposed to be an aneurism, till the patient disobeyed his surgeon's restrictions, and was cured. It is a useful mode, to move a tumour from side to side, with the finger on the artery, to see whether the pulsation remain in the same spot. In extirpating carcinomatous tumours, care must be taken not to mistake the hard ends of the ruptured arteries for specks of diseased matter.

A most interesting, but a very long case with plates, is given, in which an ANEURISM of the AORTA was supposed by all the eminent surgeons in Edinburgh and Glasgow, to be aneurism of the subclavian artery, and had they been sure of the healthy state of the arteria innominata, they would have attempted to tie it. This case is strongly illustrative of the ingenious remark of Sir A. Cooper, that as there is much hazard of confounding these,—the subclavian ought not to be tied nearer the heart than the scaleni muscles. In this case, the trachea was both displaced and compressed by the tumour, and the œsophagus was forced completely from behind the windpipe. Hodgson *in*

his excellent work on *The Diseases of the Arteries and Veins*, mentions a similar mistake:—an aneurism of the arch of the aorta, having been so strongly thought to be CAROTID ANEURISM, that the tying of the carotid was actually proposed. Dissection shewed the error, for the carotid was found to be sound. In the CASE of a very large subclavian aneurism, Sir A. Cooper attempted to tye the artery above the clavicle, which was thrust upwards by the tumour, so that the ligature could not be passed under the vessel, without the risk of including some of the nerves of the axillary plexus; and the attempt was abandoned. He adds to this, Mr. Ramsden's interesting case of axilliary aneurism, with which all our surgical readers are, of course, well acquainted.—*(Prac. Observ. on Sclerocele, &c. by T. Ramsden.)*

EMPHYSEMA occurred to a patient of Mr. J. Burns,' from an operation on an encysted tumour, above the clavicle on the side of the neck. The matter in the tumour was evacuated, and a seton was passed through it: thirty hours after, air escaped from it, and the emphysema was soon general—the scrotum being as large as a man's head, though no communication with the trachea or lungs, and the cellular membrane could be discovered. The affection, however, usually occurs from a rupture of the bronchial cells. Portal, in his Medical Anatomy, has shown that there is a connection between the cells of the lungs, and the rest of the body—as there is between the lungs and the bones in birds, so finely described by Mr. Hunter.

In operations about the throat, the head is usually inclined, at so considerable an angle, as to alter materially the natural position of the parts. By bending, indeed, the head backwards as far as it will go, we increase by a whole finger's breadth the space for the operation of TRACHEOTOMY. It is of much practical importance, though it is not easy to determine, before operating on the parts here, the exact place where the omo-hyoid muscle crosses the sterno-mastoid, *as this fixes the situation of the common carotid artery.*

One rule is, that this crossing is four finger-breadths above the clavicle, and nearly opposite the upper margin of the cricoid cartilage; but this is not always to be trusted.—Lay a thread, along the anterior margin of the sterno-mastoid muscle, from the forepart of the mastoid process, to the centre of the upper bone of the sternum. Lay another thread in the direction of the omo-hyoid, from the side of the hyoid bone, to a point a little nearer the sternum, than the central part of the clavicle. *The common carotid is very generally, though not always placed under the crossing of the threads.* If a thread is laid from this

crossing up to the jaw, it will point out *the course of the carotid.* Lower down in the neck, there is no certain rule to discover its course and situation.

Along the whole of the middle region of the neck, the common carotid is accompanied with glandulæ concatenatæ, which often swell and appear like aneurism, as in the cases described by Dr. Heberden. By lateral pressure, not emptying the tumour, and by all pulsation being destroyed when it is pulled forward, its real nature will be found; *in such tumours, the pulsation is even stronger than in aneurism.* When these tumours are larger, their pressing upon the nervus vagus and the great sympathetic, deranges respiration, deglutition, and the chylopoetic viscera. In extirpating such tumours, the knife ought only to be used for dividing the integuments. The tumour, after being carefully detached as much as possible from its connections, is to be wrenched away by the right hand, which will prevent hæmorrhage, and is little more painful, if dextrously and quickly removed, than by incision.

In the middle region of the neck is a minute nameless gland, scarcely larger in a healthy state than a common millet seed. It lies between the hyoid bone and the thyroid cartilage, beneath the hyo-thyroid muscle, and it is only separated from the epiglottis, and the bag of the pharynx, by a thin membrane. As it is firmly braced down by the muscle, the fascia and the platysma myoides, *when it swells, its effects on deglutition and respiration are dreadful.* In one CASE this gland was found affected with fungus hæmatodes; in another it produced death by its effects on breathing and swallowing. The patient was a female of emaciated habit, who first complained of uneasiness in swallowing, though for several months no swelling of the parts was perceptible. Eleven months from the first symptoms the little gland was found about the size of a large walnut, which on pressure obstructed respiration, and produced a hoarse, wheezing sound, and very painful deglutition. Its pressure upon the velum caused the fluid which she attempted to swallow, partly to return through the nostril. As the disease advanced it was accompanied with severe paroxysms of lancinating pain, and the tumour did not increase externally, but shot inward upon the pharynx. Upon dissection, the rima glottidis was found nearly obliterated, and the tumour filled almost the whole bag of the pharynx. The struggles for breath and craving for food were latterly most distressing to witness, but the time for operation had unfortunately elapsed. The interesting preparation from this case we have ourselves seen. The important inference deducible from it, is, that *tumours of the neck ought to be early removed,* for if an

operation had in this case been performed, before the tumour had enlarged into its subsequent complicated connections, the woman's life might have, in all probability, been saved.

In the BIFURCATION of the COMMON CAROTID into external and internal, there are so many anomalies, that it is important to be aware of this. It sometimes bifurcates low in the neck;—sometimes it does not divide at all, but merely sends off branches on every side; and sometimes, instead of the external carotid a series of large rami are found, of many of which varieties we have seen fine preparations in the author's museum. Whether these and others were carried away by his successor Mr. Pattison in his flight to Philadelphia, we have not learned. It is however important to know that the external carotid usually lies closer to the pharynx, and farther from the nerves and internal jugular vein, and is therefore more easily tied than either the internal or the common carotid, which are nearly in contact with this vein and the large nerves. Yet, notwithstanding such hazardous connections, the tying of the carotid is no longer a matter of doubt and speculation, though it is one of the boldest, and at the same time one of the nicest operations in surgery.

In the OPERATION FOR ANEURISM, was there, from remote antiquity to the time of Hunter, a single addition made to our practical knowledge? Hunter discovered no new facts, but he generalized what was known—improved the operation—and laid the foundation of the principles which have since been so admirably developed by Thompson, Jones, Hodgson, and Scarpa.

COMPRESSION in cases of aneurism, the only rational mode of cure besides abstemiousness, is indicated when the tumour is neither painful nor discoloured, and it never does harm when not productive of much pain. We ought not to produce inflammation, which will infallibly end in gangrene; but we should try to produce coagulation, and if this succeed the absorbents will complete the cure. Compression ought to be cautiously managed, otherwise it may do much harm. A *firm* compress and a *tight* roller cannot be too strongly reprobated. The roller ought to be drawn less tight the nearer we go to the part; when it increases the numbness of the parts, it ought wholly to be wholly laid aside. The treatment by compression must be long continued, even after the tumour disappears, and the most rigid abstemiousness and occasional bleedings will be indispensable: a discipline which few, except timid patients, will prefer to an operation.

As we have already (*Quart. Journ. Foreign Med. and Surg. vol. I. p. 9.*) given a very full view of the practice of employing LIGATURE IN ANEURISM, with the latest experience of Mau-

noir, Beclard, Scarpa, Boyer, Dupuytren, Roux, &c. we think it the less necessary to be so particular in giving our author's views, for though ingenious and sensible, they now possess little novelty. He thinks Dr. Jones lays too much speculative stress on the division of the inner coats of an artery by LIGATURE; not adverting to the fact, that it is not only at the point of division that the sides adhere, but up to the next branching. The internal coats of an artery never granulate; if, therefore, we do not succeed in uniting by the first intention, SECONDARY HEMORRHAGE will ensue. Secondary hemorrhage also occurs from the artery being separated from its sheath, for the coats being supplied with nourishment by vasa vasorum, derived not from the artery but from the neighbouring arteries, when it is insulated from them it dies and sloughs in a few days; and secondary hemorrhage also occurs from sinuses forming in the course of the artery, as in Mr. Abernethy's instructive case of inguinal aneurism. *This fact is very important.* The COLDNESS OF A LIMB after the operation for aneurism, ought not to be artificially removed by embrocations, and warm bricks: flannel is enough. If we stimulate it, we destroy it. Wine, as well as opium, given internally, produces in such a limb insufferable heat. Of this the author gives a very interesting CASE:—

The patient was a middle aged man, who had a small popliteal aneurism operated upon in the usual manner, and the cure seemed to go on most favourably, till from some irregularity of regimen, his general system was brought into disorder, attended with great prostration of strength, and unconscious discharge of the urine and fæces. It was judged proper, from the urgent diarrhœa, the rapid sinking, and the facies Hippocratica, to prescribe a cordial mixture, with a grain of solid opium every four or five hours. This, in ten hours, checked the purging; but what is most worthy of remark is, that the limb which had from the time of the operation felt cold, began *from the action of the stimuli to feel insufferably hot;* "as hot," he said, "as if on fire," and the foot put on all the usual appearances of gangrene. This,—by small quantities of wine and tincture of bark internally, and camphorated spirit used as a lotion—began to disappear; both ligatures, in about a fortnight, had come away, and the wound had healed; but his system was irreparably debilitated, and he died in a few weeks. The limb was, in fact, in similar circumstances to a frost-bitten part suddenly heated. The case of Ballon, in the Appendix to Wishart's Scarpa, is nearly similar; for tinct. opii. produced a burning sensation extending from the knee to the sole of the foot. *In operating for*

aneurism, therefore, over-excitement in the after treatment is as much to be dreaded, as want of blood in the circulation of the limb, immediately after the operation.

When there seems to be a TENDENCY in the system towards ANEURISM, it becomes a question of great nicety, whether we should operate on any particular aneurism externally situated. Both Sir A. Cooper and our author are of opinion, that except in old and debilitated patients—in cases of febrile excitement,—and when internal aneurism is unequivocally ascertained, the operation ought to be undertaken. Even if the patient should afterwards be cut off by internal aneurism, the surgeon is not to blame. In the CASE of a gentleman, who had strong symptoms of disease of the heart, or the aorta (it is not always easy to tell which is affected), and who had at the same time an incipient popliteal aneurism—the compress bandage was employed—coagulation of the blood in the sac evidently produced, and the uneasy symptoms of the leg removed; though the dispnœa, palpitation, and dull pain of the chest continued. In the CASE of Macdonald,—whom Mr. Freer cured of inguinal aneurism, of the right side, and whom Mr. Anderson afterwards cured of popliteal aneurism; but who died from the bursting of an aortic aneurism, in consequence of his imprudently leaping a ditch,—the same was shown.

In operating for CAROTID ANEURISM, which occurs most frequently at the bifurcation of the external and internal, *the chief risk is the injuring or including in the ligature the thoracic duct.* For the nerves if divided will reunite, and the jugular vein if injured, will transfer its circulation to some collateral branches; but for the thoracic duct there is no substitute, even though we do take into account the anastomosing of the lacteals with the lymphatics of the liver and diaphragm, through which the chyle *partially* finds its way to the blood in obstructions of the duct. The duct lies just behind the carotid, between its sheath and the great sympathetic, mounting in some cases pretty high in the neck before it curves downward and outward to join the subclavian vein. It is of very small size, except after a full meal, and may therefore be either overlooked or torn. The operator ought to keep as much as possible *in contact with the coats of the vessel on the back part,* which precaution also applies to preventing injury of the sympathetic nerve and the superficialis cordis. In passing the ligature round the carotid, care ought to be taken not to carry it behind the sheath, for so long as it is not so carried, none of the important parts can be included. Before this be done the sheath must be opened with great caution, merely scratching through it over

the artery till a director can be introduced. The needle of unalloyed silver, recommended by Mr. Abernethy, is to be preferred. This operation altogether requires so much nicety, that when we consider the patient struggling with pain, and the wound drenched with blood, we marvel at the dexterity of the surgeon who successfully performs it. We need not, as our author does, detail Sir A. Cooper's case of Humphreys, as we have taken notice of it in a former number. The connections of the thyroid gland require to be particularly studied, for though perhaps its diseases are not very frequent, yet they are accompanied with so alarming and dreadful symptoms of dyspnœa and dysphagia, that the surgeon ought always to be prompt, early, and decided in his treatment.

INFLAMMATION OF THE THYROID GLAND, in consequence of its ample supply of blood, is not an uncommon disease. When inflamed it is much enlarged, its substance appears more vascular, and it is firmer to the touch, in consequence either of the extravasation of blood, or of coagulable lymph. The SYMPTOMS are swelling, and pain, increased on pressure, and in the act of swallowing. It is distinguished from bronchocele by its pain, rapid progress, and being much less swelled. If it suppurate and burst externally, it will leave a scar on the neck; if internally, it will pour its contents into the trachea, and induce suffocation. In the collection of Dr. Hunter there is a preparation showing the latter case. The practitioner ought to do every thing to make the disease terminate by resolution. When this is effected the blood vessels return to their healthy state; while the deep seated absorbents are excited to increased action, and take up the extravasated blood or coagulated lymph. This indicates a sympathy existing between the internal and external absorbents; mercurial ointment for example, rubbed on the scrotum reduces a swelled testicle, by sympathy between the absorbents of the scrotum and those of the testicle itself.

In the CASE of the female, treated by Mr. John Burns, both lobes of the gland suppurated, and the integuments dilating, hung over the sternum like a pouch containing several pounds of purulent matter. Hectic was considerably advanced, but there was no tendency in the abscess to burst. It was accordingly advised to be punctured and the contents drawn off, as recommended by Mr. Abernethy for psoas abscess, but this she refused to permit. She lingered on for some weeks, till the abscess broke spontaneously, and she was ultimately cured. Though however in this case the matter burst outwardly, yet in most cases it may be expected to work its way into the œsophagus or the trachea. Enlargement of this gland is sometimes a con-

sequence of parturition, and in such cases it occasionally though rarely suppurates. Sometimes also it is found filled with blood, as occurred in cases of the author's and his brother, and the same is mentioned by Dr. Monro, jun. of Edinburgh, and by Portal.

In cases of DROPSY OF THE THYROID, the cure is effected by incision, or by puncturing the cyst, and injecting wine and water, as in the radical cure for hydrocele. When it is important to avoid a scar, it may be opened by a solution of muriate of ammonia in cold water, in preference to the knife. Dr. Monro, sen. had seen a case of thyroidal dropsy cured by a seton.

It will be unnecessary to enter at much length into the description of BRONCHOCELE, which is more common in females than in males, and in mountainous than in plain countries, for instance Savoy. The thyroid gland when cut into is found cellular, and the cells filled with a viscid fluid. SYMPTOMS.—This disease may be known from other swellings of the thyroid, by its slow growth—its magnitude—its want of pain—by its occurring mostly in youth—by its firmness and want of hardness—and by its not affecting the health.

In the treatment of bronchocele, it is recommended, where extirpation is thought unadvisable, to tie the thyroid artery, as was done by Sir W. Blizzard; the case however was unsuccessful. In a week after tying the artery, the tumour was reduced a third, when the patient died, though not in consequence of injudicious operation, but from his becoming affected with hospital gangrene. The tying of the arteries may even reduce the tumours, so as to make an operation easy, which was previously impracticable.

Bronchocele however seldom requires either extirpation or tying the arteries, as milder means may often succeed. Even spontaneous cures are not uncommon in young women when the menses first appear, and others have taken place from suppuration as we learn from Schmucker and Volpi. Topical detraction of blood, and repeated friction are very beneficial. FRICTION is best performed by a piece of flannel and hair powder. The rubbing is to be continued for about half an hour, three times a day. In the CASE of a gentleman, who was afflicted with tumours in the neck, that had resisted every sort of treatment, an empiric succeeded in performing a cure, by repeated purgatives and blisters, *removing the cuticle when it rose, and briskly rubbing the raw sore with coarse tow:* in obstinate cases, the author observes, we must employ what mistaken humanity would term harsh measures: nothing else will do. Gum-plaster is recommended by Mr. Blizzard, and the author

found good effects from friction, with ung. Hydrarg. ʒi. Camph. ʒi. In Switzerland burnt sponge is used internally, but internal remedies are not to be relied upon. Dr. Clarke cured two cases with a steady use of compound plaster of ammoniac and mercury, and occasional purgatives with burnt sponge. Sir James Wylie, of St. Petersburgh, applies to the tumour a plaster of litharge, calomel, and tartarized antimony, and exhibits a powder composed of laurus cassia bark, burnt sponge, calomel, and ammoniacal muriate of iron. Dr. Coindet, of Geneva, in his late trials of iodine, has exhibited it with success in this affection. A translation of his papers by Dr. J. R. Johnson, of Bristol, has just been published. We greatly wonder how it entered into the fancy of M. Richerand, that the disease is absolutely incurable, either by topical or general treatment. (*Nosogr. Chirurg.*)

CARCINOMA is also one of the affections of the thyroid gland. It differs from *fungus hæmatodes* in being solid, incompressible, irregular on its surface; and the ulcers (when formed), have then margins, and are livid, glassy, and *retroflected*. When a fungus forms, it sloughs and leaves a deep cavernous pit, ragged and *reverted* on the edges: while fungus hæmatodes is yielding and elastic, irregular on the surface, but the knobs yield to pressure. The edges of the ulcers are *never reflected*, but the fungus is often so closely embraced by them as to induce profuse bleeding. This also sometimes produces a slough, but never leaves a cavernous pit. One part of a tumour may be schirrhous or strumous, while the other is fungus hæmatodes.

In the CASE of a tumour, which occurred in the thyroid gland, in a poor woman sixty years of age, the affection was dated thirty years back from *a stress*,—the cause usually assigned in Scotland for most diseases. Latterly it increased very much, and finally burst, and a bloody serum was discharged, giving great hopes to all, that the cure would be completed spontaneously. But in six months after, it returned worse than at first, and at last she died. On dissection the substance of the tumour was found to be distinctly carcinomatous, full of membranous intersections and substances of a soft texture.

The SARCOMA MEDULLARE of Abernethy differs from fungus hæmatodes, in being of a uniform pulpy consistence, of the colour of the cortex of the brain, and wanting the membranous septa which are always present in fungus hæmatodes. This is equally intractable with cancers and fungus hæmatodes, and ought never to be cut into except it be entirely removed. Tying the arteries will not alter the specific action of the parts, as in bronchocele, &c. In a CASE of medullary sarcoma of the thy-

roid gland the patient was in extreme misery, unable to breathe or swallow, except with great struggling, in consequence of the enormous size of the tumour. An ignorant surgeon, for what purpose is not apparent, made a deep gash into it, unaware that in such tumours, though not in carcinoma, and seldom in fungus hæmatodes, the carotid artery buries itself in the soft sarcomatous substance: His knife in this case was within a hair's breadth of the artery. We are sorry to say, that though tying the artery has the effect of diminishing simple bronchocele, this has no influence over carcinoma, fungus hæmatodes, or medullary sarcoma, as the specific action cannot thus be destroyed; and we must therefore trust wholly to the extirpation of the diseased gland.

The thyroid gland is EXTIRPATED by making a cut of an eliptical shape over it, from above to below, dissecting back the integument; then pushing the finger upwards and backwards till the superior artery be felt which is to be tied, and in like manner the other thyroid arteries. The tumour is then to be detached by cautious working with the fingers. In front it is covered and bound by the thyroid and sterno hyoid muscles; below, it touches, or nearly so, the arteria innominata; on the left it touches the gullet, and lies over the recurrent nerve; on both sides it is near, or touches the carotid, the jugular vein, and the visceral nerves. Besides the four arteries, an anomalous one sometimes passes from the arteria innominata, and enters the cross slip on the fore-part of the trachea.

If this state of things be well understood, the operation will not appear so formidable as it has been represented by Albucasis, Wilmer, Prosser, Palfin, and others, particularly when we have successful cases on record by Desault, Freytag, Gooch, and Sir A. Cooper.

In SCHIRRUS OF THE THYROID, the gland is hard, and not very much enlarged. A section shows a solid brownish-white consistancy without cells. The chief symptom is lancinating pain: it occurs in old age.

OSSIFICATION OF THE THYROID, occurs in old age; but seldom. It is not usually of great consequence; but it may produce inflammation and ulceration of the larynx or the trachea, and prove fatal. When superficial, the bony excrescence can be felt; if deep seated, it will be difficult to detect the disease.

The EXTIRPATION OF THE TONGUE is to be accomplished by first tying the lingual artery, which is to be done by cutting down upon it, through the integuments, and anterior belly of the digastric muscle, the mylo-hyoid, and the genio-hyoid, when it will be seen lying between the genio glossus, and the lingualis

muscles, where it runs parallel to the horn of the os-hyoides. The only large nerve here is the lingual, which is in contact with it from its root, till they reach the side of the tongue, where they are separated by the hyo-glossus muscle, which continues between them forward, to its origin from the body of the hyoid-bone.

The older surgeons thought it would be necessary to tie the vessels, *in situ*, where they are divided; but they do not inform us, how these were to be come at. When only a portion of the tongue is removed, the hæmorrhage is stopt by suture, as in Langenbeck's case; or by the actual cautery. Sir E. Home prefers removing such portions by the double ligature, which has been employed with success:—see, also, Riolan and Portal. In SNIPPING THE FRAENUM LINGUALE, an operation often performed, but very seldom necessary, the scissars must not be pointed upward and backward, but rather downward, otherwise the arteria ranina may be divided.

In the natural upright POSITION of the HEAD, the sub-maxillary gland, and the facial artery and vein, lie retired behind the body of the jaw-bone, but, by bending back the head, and elevating the chin, they are brought out from behind the jaw-bone, and much exposed. This is indispensable to be known in removing the tumours, which so frequently arise here in the conglobate glands, clustered around the salivary sub-maxillary gland. In Mrs. M'Donald's CASE the throat was girded from ear to ear by a chain of tumours, so clustered and matted among the muscles, nerves, and vessels, as to defy any operation. The dyspnœa was great, and she was only occasionally relieved, by the bursting of some of the cysts. Nothing could be done for her; and the author regrets the impotence of surgery.—In all such cases, where an operation is in question, we ought carefully to ascertain, whether the tumour be simple or specific; whether it be phlegmonous, or cancerous, or sarcomatous, or syphilitic.

In CANCER of the LIP, particularly of the under lip, careful examination ought to be made of the sub-maxillary and conglobate glands, as these are often affected, and if left so, the disease may recur with more virulence than ever. In dissecting out these glands, the patient's head must be bent a little back, and his jaws kept shut, a crucial incision being made, and the integuments dissected back. The finger is to be wrought cautiously inward, till the labial artery be felt and secured. The submental artery is to be snipt, and the slip usually joining the sub-maxillary and sub-lingual gland.

The SALIVARY GLANDS, besides inflammatory, scrophulous,

and cancerous affections, have frequently stony concretions formed in them—forming a dense, firm, chronic tumour under the tongue. This is easily cured by an incision made at the side of the frænum, and extracting the concretion. We have seen, in the author's museum, several specimens of such concretions.

The disease called RANULA, and by the French *Grenouillette*, begins like a small swelling under the tongue, which is succeeded by dryness of the part. By and bye, the tongue is pushed upwards; and the patient can neither speak, breathe, nor swallow, without great difficulty. As the disease advances, suppuration takes place, the tumour bursts, and a glary matter is discharged. If it is not cured in this stage, it proceeds to suppurate again, and the discharge becomes now purulent, accompanied with an induration of the parts, which threatens to suffocate the patient. In OPERATING, a curved bistoury is to be introduced behind the frænum; an incision made, and the parts to be stimulated. It is, indeed, to be treated, by caustics, exactly like a fistulous sore. In a CASE which occurred to Professor Brown, a girl who had *ranula* was completely cured by taking out of the sub-lingual duct, an induration of the size of a millet seed. Ehrlich gives a CASE, which occurred to Mr. Cline, of a gentlemen that had come to consult him, for what he supposed to be a trifling tumour. Mr. Cline, having heard a person groan, and fall down in the waiting room, ran to him, and found him nearly senseless, and almost suffocated. Suspecting that some foreign substance had got into the trachea, Mr. Cline was about to perform the operation of bronchotomy, when he observed a large ranular tumour, pushing the tongue back into the fauces. He immediately plunged his lancet into it, and evacuated a large quantity of pus and lymph. The most wonderful thing in the case, is that the patient had felt little inconvenience from it, till this sudden and unforeseen attack: ranula is usually of slow progress.

When the TONSILS suppurate, the pus is sometimes discharged through the velum, and forms an ulcer, which may readily be mistaken for venereal. In opening such an abscess, we ought to remember, that the carotid artery is near, and may be in danger. To avoid this, cut directly backwards, but not with the point of the instrument directed to the angle of the jaw. As there is often risk from the pus producing suffocation, when the abscess is large, it should be drawn off with a canula, as in hydrocele: the trocar ought to project only a small way. The bleeding is checked by a cold-water gargle, or a camel hair pencil dipt in oil of turpentine, or alcohol—or by a

hot wire passed through a canula. If fungus arise from the wound, it is to be touched thrice a day with finely powdered mur. ammonia.

There are sometimes, though not frequently, CALCULOUS concretions formed in the tonsils, which must be treated similarly to the above mentioned concretions in the sub-maxillary glands. In one family at Beith, THREE CASES of this occurred: the first was that of a girl, who upon catching cold, had an abscess formed in the left tonsil, which burst externally, and on probing the sore, the surgeon discovered a calculus, which was subsequently removed, and the cure completed, with no return of cynanche for twelve years. The brother of this woman had a calculos, in his tonsil, twenty years before it was discharged; and another member of the family had one, which was of two years continuance, when it dropt into the mouth spontaneously.

When the PAROTID GLAND is diseased, it is impossible to extirpate it, though Mr. Charles Bell, (*Dissections*, pp. 249). says, he assisted his brother in this impossibility; and Mr. John Bell asserts, (*on Tumours*, pp. 210). that he, "had often extirpated the diseased parotid"; though in his Anatomy, (vol. ii. pp. 293.) he says, "The cutting out completely of the diseased parotid gland, is a thing quite impossible." ! ! !—Which of these statements are we to believe?* The truth is, that the locality of the gland, is so indefinite and uncertain, and it is so wedged in among the muscles at the angle of the jaw, that when injected with quicksilver through its duct, no portion of muscle can be cut in the vicinity, where the quicksilver does not escape. This is enough to prove the impracticability of extirpating it, independent of the temporal and maxillary arteries, lying imbedded in its substance. The supposed operations of extirpating the parotid, seem to relate to one of the two conglobate glands, usually connected with the parotid.

In the CASE of a gentleman who had three considerable tumours, for several years, under the angle of the jaw, Mr. John Bell imagined them to arise from dilated veins, inclosed in a bag, and twice made an incision, which was followed by hæmorrhage, but without effect. Of three London surgeons of eminence, who were consulted, one said the tumours were glandular; another, that they arose from torpidity of the lymphatics; and a third, that they arose from biliary derangement. Mr. Anderson of Glasgow, removed the tumours,—after consi-

* We have no doubt, that Mr. Charles Bell can exculpate both himself, and his celebrated brother, from these inconsistencies. It was, indeed, one of Allan Burn's foibles, to be too fond of criticising the Messrs. Bell.

derable hesitation to operate, and the wound healed in a few days, though fungus had been half anticipated.

A sacculated parotid tumour, which usually contains only saliva, is distinguished from a pouched dilatation of the jugular vein, by its not being emptied on pressure like the latter. The former is cured by seton and stimulant injections; in the latter, no operation must be performed.

In TIC DOULOUREUX it is the trunk, and not the branches of a nerve which ought to be cut. The portio dura, for example, should he cut just where it escapes from the stylo-mastoid hole, by making an incision along the anterior edge of the mastoid process, and downwards and forwards along the forepart of the sterno-mastoid muscle; for though the nerve is here deeper seated, it is less connected with important parts.

The NERVES after division, if left in contact, unite and form a portion of nerve, having the same properties as if they had never been divided. Dr. Haighton proved this by several experiments on dogs, and it ought always to be remembered in operating for tic douloureux; for if only branches are cut, the inosculating branches will still remain diseased, as happened in Mr. Abernethy's finger case.

In removing tumours, situated on the course of the PAROTID DUCT, care must be taken not to injure it, and produce an unmanageable fistula salivaris. This is to be done by first making a very shallow incision, and afterwards working cautiously with the fingers. If a fistula is unfortunately formed, it must be treated with red precipitate, actual cautery, or, by enlarging the orifice of the duct in the mouth, and putting a silver tube along it to conduct the saliva. In a CASE of obscurely defined tumour, lying before the edge of the masseter muscle, and supposed to extend deep behind the ascending plate of the lower jaw-bone, it was not deemed adviseable to operate—a seton was introduced below the jaw, and the tumour disappeared.

In extirpating ANASTOMISING ANEURISM, our author, in one CASE, dissected clear and insulated, above three-fourths of an inch of the parotid duct, and of the portio dura. The case was that of a stout young man, who had a congenital tumour, livid, cold, and like the wattles of a turkey-cock, compressable on the right orbit above and below, descending an inch below the duct, and hanging down over the cheek. It throbbed, became tense, hot, and painful, only when it was injured, or when he walked fast, either in very hot or very cold weather. It could be emptied, on pressure, but no large vessel could be traced into it. After it was as completely dissected out as could be done, there was still blood oozing from some of the parts to

which the disease extended. A sponge was therefore bandaged into the wound for two days, when the bleeding stopped, and the part, after a good deal of trouble in repressing fungus granulations, was completely healed, and, for more than three years, there was no return of the tumour. Our author is inclined to think that such aneurismal tumours are cellular in structure. *Any attempt to cure these by ligature of the arteries supplying them, will be useless. They may sometimes be operated upon with advantage, even where the whole of the tumour cannot be dissected out, provided it be situated over a bone, so as to allow of strong pressure.* In a very interesting CASE, where an anastomosing aneurism occurred on the temple, and run deep behind the zygoma, Messrs. J. and A. Burns cut out as much of the tumour as they could reach, and then wedged a piece of sponge firmly behind the zygoma, where it was allowed to remain for three weeks. The wound healed well. It is curious to remark, that this tumour, being deep-seated, was not discovered till a surgeon, on opening the temporal artery, to relieve a supposed incipient apoplexy, cut the aponeurosis of the temporal muscle which bound down the tumour, and produced the unsubduable hæmorrhage, which led to the preceding successful operation. Thus did accident overturn the oracular decision of Mr. John Bell—that such operations should not be undertaken.

In a very small CASE, which fell under our own observation, an artery, or congeries of arteries, under the orbit on the right cheek, seemingly not larger than a pin's head, and covered only by the epidermis, continued for some years after the healing of an ordinary pimple, and was occasionally painful, with a pricking, or rather burning sensation. The epidermis having been accidentally ruffled over it, the blood sprang out in a pulsating jet, and several ounces were allowed to escape, in order to relieve a slight head-ache. The bleeding was afterwards stopped by burnt sponge, and the part healed, without any return of the tumour, at least for nearly a year.

When pins are to be passed after OPERATIONS ON THE LIP, care must be taken that they be completely behind the coronary artery, which is only covered by the membrane of the mouth; for if not, the wound will gape behind, and though the hæmorrhage may have for a time ceased, from the faintishness usually consequent upon an operation, yet will it return, and the patient being forbid to spit, and ordered to swallow every thing, serious injury may ensue from his swallowing the blood, as occurred in a CASE which the author once witnessed.

The question of the DECUSSATION OF THE OPTIC NERVES

was brought strongly under our author's notice, in a CASE of fungus hæmatodes of the eye, which was afterwards published by Mr. Wardrop, in his original and valuable work on that disease, which, as it is scarce, we shall probably soon retrospect. The optic nerves were, in this instance, very dark coloured, but though this dark colour extended behind the joining of the nerves, *it was confined wholly to the left side of the nerves,—the side of the diseased eye.* The nerve of the right side was of natural colour and structure, and only attached to the left nerve by cellular shreds. In this case, then, the *optic nerves did not cross.*

When STRICTURE OF THE LACHRYMAL DUCT is suspected, a probe should be passed along the floor of the nostril into the duct, taking care not to take up a fold of the nasal membrane, and *never to use force.* The author, in such cases, sometimes made a lancet puncture into the lachrymal sac, *provided no external inflammation was present,* and was successful, the puncture healing kindly, without much eschar. If inflamed, such puncture will heal with difficulty.

Some very interesting cases and observations on fungus hæmatodes will perhaps come more in our way in a subsequent paper, and are here therefore omitted.

IN OPENING THE TEMPORAL ARTERY, or the internal maxillary, where it passes the zygoma, press it firmly, a little higher up than the point you fix upon, with the fore finger of the left hand, and lower than this point with the thumb, which will keep the canal distended with blood. Cut the integuments for about half an inch, then puncture longitudinally. If this is attended to, failure will seldom occur. If not held firm, it will roll from the lancet, and if cut across, it will not bleed. Anastomosing aneurism has been erroneously supposed to arise from the opening of the temporal artery.

The CAROTID ARTERY sometimes requires to be tied in suicide, and this can best be done where it is superficial, and covered only by the fascia, the platysma, and its own sheath. Its place will be found by insulating a triangular space with threads, one from the mastoid process to the junction of the horn with the body of the os hyoides; another along the inner edge of the sterno-mastoid: and a third from the side of the body of the os-hyoides to near the centre of the clavicle. The artery along this space is accompanied by nerves and the jugular vein. Lower, it is covered by the sterno-mastoid, the sterno-thyroid, and omo-hyoid muscles; and higher it sinks behind the angle of the jaw.

We perform BRONCHOTOMY either to remove a foreign body from the trachea, or to inflate the lungs. In the CASE of a

child, in which a horse-bean had got into the glottis—alternate fits of coughing—of strangulated breathing—and of ease, preceded death. The child was evidently killed by not operating. In another CASE, a young woman had a plumb-stone enter the wind-pipe, in which it could be perceived to move up and down in the act of breathing, and produced a tickling sensation, but could not be expelled through the rima. This illustrates the fallacy of the opinion, first experimentally disproved by Favier, that we cannot operate with success where the foreign body is below the point of incision; for in such cases, cæteris paribus, expiration will force the body through the opening. Our author inclines to Desault's opinion of rather inflating the lungs through the nostril, by means of a flexible tube, than performing bronchotomy for this purpose. Mr. S. Cooper, however, in his criticisms on his proposal, thinks that bronchotomy will save time, as it may safely be performed with a penknife, and by a surgeon of very ordinary skill; while Desault's flexible tube may not be at hand. We expect soon a valuable paper on this subject, from our correspondent, Dr. De Sanctis, who has made it the subject of many ingenious experiments.

Consistent with our plan of giving our Journal as much variety as we can—of keeping up a fair proportion of Medical as well as of Surgical papers—and of affording space for our new departments—the ENCYCLOPÆDIA and the CRITICAL CHARACTERISTICS of Books, we cannot here afford room for the numerous observations of (we may say) secondary importance, which copiously abound in the work. We have been anxious to give ALL that is of the greatest interest, and to condense, in the fewest possible words, the valuable practical observations of the author, even when not altogether new. It is one of his faults, indeed, to be too wordy—a fault which leads him sometimes into trifling obscurities—as is incident to most writers who are called eloquent; for, in the care to polish and round their sentences, or to ornament them with fine words and figures, the idea meant to be conveyed is often lost sight of.

The practical writer should always avoid the pretty art of sentence-making, and keep close to his subject in clear, pointed, and short periods; and he should never give into the silly and affected pedantry of bristling over his pages with new or uncouth Greek terms. Such are only the resort of those who try to conceal their small genius, and smaller learning, by a foolish and unintelligible jargon of what may justly be called *medical cant*. We may say of useful practical information what Thomson says

of genuine beauty, that it "is, when unadorned, adorned the most.".

By keeping this principle in view, (though we are well aware it is not so easy to follow it up as to state it) we shall be able, we hope—at least we shall endeavour—to condense into our pages six times the quantity of information which we could give, were we only to make unabridged extracts from the books reviewed, or to indulge ourselves in our own speculative remarks, which we might, no doubt, think very ingenious—as self-flattery would not fail to whisper—but, which might be of no use whatever to our readers, when called to a patient's bed-side, or into a court of justice.

Court of Appeals.

"Judex damnatur cum nocens absolvitur."

Motto to THE Edin. Review.

Dr. Haslam *versus* The *New* Edinburgh Review.

We seek for truth, and are of no party. We seek for justice—impartial and unbiassed justice—towards the profession whose annals we are recording. We seek for facts rather than opinions; and when we meet with unsupported assertions, where we expect inductive conclusions, we must (and who can blame us?) throw them into the lumber-room of our inadmissable communications. When such assertions, however, are not only unsupported by fact, but put on the aspect of injurious detraction, we think it our duty, as professional men, to deal with them as they deserve;—we think it right to give them publicity in our pages, but, at the same time, to accompany them with such befitting antidotes as may neutralize their impoisoned tendency, or destroy the venom of error and ignorance.

A case somewhat of this kind has just been pointed out to us, in the pages of a journal of high pretensions, but of humble execution,—(The *New* Edinburgh Review),—one of the distinguishing "features" of which, we are told in the prospectus,

is "faithful and impartial criticism," and recording "equitable judgment" on the "merits" of the works which it condescends to notice. Now we cannot doubt that these journalists intended most faithfully to keep to these promises; but neither can we doubt that this was beyond the range of their genius, at least on medical subjects. Of other things we pretend not to judge, though we are told by no less a personage than Dominie Sampson, that these sages did "record an equitable judgment" on "Goldsmith's History of England, abridged for the use of Schools;" * and penned on this very novel work, as "faithful and impartial a criticism" as could have come from Jedediah Cleishbotham, the renowned schoolmaster of Gandercleugh. We should recommend them in future to confine themselves to school-books and Spurzheimism, and never again to intermeddle with such a work as Dr. Haslam's, which is fraught with too much plain good sense for the muddled metaphysical understandings of the North to relish.

Let us hear this "faithful and impartial criticism" of our pædagogical Reviewers on the classical work of Dr. Haslam on Sound Mind. "We have hesitated," say they, "whether we should notice this publication, or allow it to sink into that state of oblivion to which we believe it is hastening, but [we] adopt the first part of the alternative, for a reason now to be explained." This reason turns out to be the very strange one, that as Dr. Haslam has had an excellent education, and no less excellent opportunities of observation, and besides has published some good works on insanity—his book on Sound Mind *must* contain "a fair specimen of the knowledge of the human mind, generally possessed by medical gentlemen in the first quarter of the nineteenth century."—How we ask is this inference made out?—on what ground is Dr. Haslam thus made the representative of the knowledge possessed by the whole profession;—but "viewed in this light," the Reviewer goes on—"the work is a kind of literary curiosity, and, in consequence [of its being a literary curiosity] *deserves to have its career arrested!*" Good, and impartial, and all to be performed by the schoolmasters of the New Edinburgh, who on opening the book, immediately discover to their great disappointment, that Dr. Haslam has not bewildered himself in the *mists* of the question, concerning the connection of mind and matter, and therefore he could of course state nothing, but "a tissue of metaphysical

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* See New Edinburgh Review, No. 1. p. 441, for this profound, learned, and edifying Review of Goldsmith's well known school-book.

absurdities, such as would *disgrace a schoolboy,*" the writer, having probably just been flogging some shrewd pupil for not comprehending his incomprehensible predicables and syllogisms, or for some item of the endless Scottish catalogue of the faculties of the mind. Such things, we have heard, occur every day among stupid masters and clever pupils.*

It is the grand omission, as we anticipated, of this catalogue of faculties, which most annoys our learned Bœotians of the Scottish Athens. "The author," he says, "confounds our *knowledge* with our *faculties*, and in consequence of this mistake, from the one end of the publication to the other, sets theory, and consistency, and sense at defiance. Again, "the author in treating of the *faculties* of the intellect, ought certainly to have elucidated the powers of the mind themselves;" and again, "instead of entering into a philosophical inquiry into the *faculties* of the mind," &c. &c. Our readers will no doubt be surprised to learn, that the whole of Dr. Haslam's work is employed in treating most philosophically, though not mystically of those very faculties, namely,—perception, memory, will, reflection, reason, and instinct. He does not indeed muster up a list of internal senses, nor does he rank among our faculties, generalization, attention, association, consciousness, and a hundred others, which on the Scots principles of classification and nomenclature, we could easily enumerate. Dr. Haslam besides is not a Spurzheimite, and does not give lessons to ladies on craniums done in Paris plaster, and marked with cabalistical numbers;—and therefore it clearly follows, as a matter of course, that "the work throughout displays a total ignorance of metaphysics, an entire absence of any rational theory concerning the *influence of the organs* on the mental powers; and, moreover, indicates a mind not at all equal to such inquiries." "There are a few, and only a very few, facts strewed here and there in the work, the knowledge of which is worth preserving; but any explanation is looked for in vain from the author:" The sections on Will, Reflection, Reason, and Instinct, are further said to be "so puerile and superficial, that we cannot [as they usually do] afflict our readers by enlarging on them." "On the whole," they conclude, "we can regard the present book in no other light than as *a lamentable proof of the author's ignorance* concerning a sound mind." Such is this "faithful and impartial criticism;" and such the "record" of the "merits" of the book before us. To prove its injustice and its venomed

* *Sunt hic*, as their motto says, *præmia laudi*.

ignorance, though we are aware Dr. Haslam is not infallible, we shall take the first count of the charge, which accuses him of omitting to discuss the question of the connection between mind and matter.

Dr. Haslam, for example, in adverting to the etymological argument from which Horne Tooke, and others, attempted to prove the MATERIALITY of the MIND; allows the premises their whole weight—but, justly arrives at the opposite conclusion. He quotes Sir I. Newton, who profoundly remarked, that "all language applied to GOD, is taken from the affairs of men, by some semblance," and he says similarly of the mind, that all the language applied to it is *material, but metaphorical;* and as we cannot speak at all of mind, without using a material simile, or metaphor, he concludes that *the mind must be something different from matter*; in the same way as from Sir I. Newton's remark, we would infer, that the Deity is very different from man, though in speaking of GOD, we always use terms applicable in a direct sense only to man, and can, indeed, understand no other.—But to the Spurzheimites of The New Edinburgh, all this is, of course, puerile and superficial, because it is intelligible, and they are sworn to wage implacable war with every thing that is plain and stript of mysticism. Had Dr. Haslam's work contained nothing but this single argument, which, besides, he has beautifully illustrated, he would have deserved the thanks of all those whom the quibbles of the French physiologists, and their English disciples, have ever led to doubt the existence, not only of their own minds, but even of the existence of the Deity. One of Dr. Haslam's illustrations we shall give. To *remember*, is derived from *re*, again, and *member*, a limb; and of course, signifies, *metaphorically*, the act of the mind, by which it puts together the *members* of its preceding knowledge. To *recollect*, he explains in a similar manner, to mean a re-gathering of ideas, though the pur-blind Reviewer "looked in vain for any explanation" in the book.

We think this alone, amply sufficient to exculpate our author from the ignorant charges brought against him, but we shall add two other instances, from those which convinced the Reviewer that Dr. Haslam does not possess "a mind at all equal to such inquiries."—The first is a curious instance of recollection, and proves, no doubt, that Dr. Haslam is incapable of observation.

At four years of age, a child was brought to its dying mother, with whom she remained three days. Sixteen years after, the young lady returned to the place where her mother died, but had lost all recollection of the exterior of the house, and did not

even know the name of the village where it was. On entering the room in which her mother had been confined, she exclaimed; "I have been here before; the prospect from the window is quite familiar to me,—and I remember, that in this part of the room there was a bed, and a sick lady who kissed me and wept." On enquiry, none of these circumstances had ever occurred to her recollection during this long interval. Dr. Haslam witnessed the recognition, and he had also seen the child with her mother. There is a similar instance, beautifully fancied, and described in Guy Mannering, when Bertram returns to Ellangowan.

His observations on the WILL OF INFANTS, and on INSTINCT, are equally simple and ingenious. The infant, he says, seems to have no control over its motions, which appear to be more spasmodic than otherwise. The flow of saliva and urine are also involuntary, without its seeming conscious of such. It must advance in power of mind, before it can *direct* any of its limbs; for direction implies knowledge. In the imperfection of the senses of sight, feeling, &c., volition would be useless.—*We* never remember these early trials of our powers; because, if we did, it would not only be superfluous, but the source of much error; since we are the architects of all our mental acquirements.

In man all distinctions give place to reason. Animals are all stationary in species, and even the few individuals which are taught a few things, never transmit them to their descendants; nor do they ever practice them alone; for no bear ever danced alone for his own amusement. If they have reflection, therefore, it seems to be of no use to them. Animals form an estimate of what they cannot accomplish:—a horse will not attempt a leap which he cannot clear; and an old hound will spare himself fatigue, by knowing the doubles of the hare. But how could a she-cat, the first time she kittened, know to secure, as she does, the navel-string of her kittens.

We need only add in the terms of the motto—Nocens absolvitur et judex (qu. *pædagogus?*) damnatur—valde damnatur.

THE FACULTY OF THE XIXTH CENTURY *versus* THE SAME REVIEW.

THIS cause arose out of the preceding. The Reviewers not contented with brandishing their ferula (*telum imbelle*, we think, it is called in some school-book,) over Dr. Haslam; make a

pass at the whole medical profession of the first quarter of "the nineteenth century," in the following words:—"We have reason to fear (why?) *that the science of mind is not cultivated by this profession* with all the attention which its importance deserves, and we regret that a knowledge of it does not constitute a part of the elementary education requisite for obtaining a medical diploma." Now why should they regret this, except to have conferred on themselves the office of elementary instructors, in their university, *where alone*, we believe, *it is not required of physicians*. It is required—(though this the Edinburgh tenant of a twelfth floor could not know,) at Oxford, Cambridge, Dublin, Glasgow, and, we believe, all the universities on the continent, even Moscow and Petersburgh not excepted. To promote their laudable wish for office, they proceed to say, "We shall endeavour, on a future occasion, to point out how the deficiency may be removed, and to state a few of the advantages which would result to the profession from a more perfect knowledge of the philosophy of man, than they in general, seem at present, to possess." Very obliging indeed to undertake to lesson the whole medical faculty; and very similar, we can fancy, to Captain Bobadil undertaking to drill the Duke of Wellington in the tactics of war! We are really astonished at the effrontery and impertinence of this confraternity of pedants! But we shall suspend judgment on these knights of the ferula till they bring forth the above threatened bravado of lessoning; and the cause is accordingly adjourned *sine die*.

British Review.

DR. WILSON PHILIP ON INDIGESTION.*

IF Dr. Wilson Philip had been as well skilled in puffing as he is in experimenting, he would, we are persuaded, have ac-

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* A Treatise on Indigestion and its Consequences, called Nervous and Bilious Complaints, with Observations on the Organic Diseases in which they sometimes terminate. By A. P. W. Philip, M.D. F.R.S. &c. Pp. 391. 8vo. Second Edition, London, 1822.

quired a much higher reputation, than his modesty and plain good sense, have been able to procure for his originality of research in medicine and physiology. His character is, in this respect, truly English, without a particle of the forwardness and frippery, which are so obtrusive in the French *savans*, and their English imitators. We were very much struck with this contrast in reading his admirable work on the Vital Functions, in which, though he completely overturns many of the boasted conclusions of M. Le Gallois, that, according to the Report of the French Institute, had proved all former systems erroneous, and were to form a grand era in Physiology; yet, so much better skilled are MM. Le Gallois and Cuvier in exhibiting *themselves* and telling their story to advantage, that Dr. Wilson Philip, even with a better cause, and with truth on his side, appears from his modesty, to be but a small philosopher beside the high-toned Frenchmen. Sallust in his Cataline ascribes all the glory of Grecian achievement to the eloquence of their historians; and for a similar reason, we should think, that had Dr. Wilson Philip read memoirs of his discoveries in the French Institute, and had had reports of them drawn up by Cuvier, the secretary, instead of sending them to the Royal Society of London in his own plain and manly style, he would at this moment be famed throughout Europe as the greatest philosophical physician and physiologist of the age.

But though his merits have not been thus prematurely lauded, his works on the Vital Functions, and on Fevers, have been gradually gaining ground in the esteem of the profession, and will, we have no doubt, honourably establish his reputation on a permanent basis. The work now before us, upon perhaps the most generally prevalent, and of course the most important class of diseases, manifests the same accuracy of observation, the same ardour of experimental research, and the same judgment in the constitutional and local treatment, which distinguish Dr. W. Philip's former well known works; and the rapid sale of the first edition is the best proof of his rising reputation, as well as the merit of the book. As the subject is of considerable interest to the profession, notwithstanding the numerous able works which have lately appeared on it, we shall give a brief digested analysis of the most useful parts of the work, from which our readers will be better able to judge of its merits and value, than from any thing which we can say in its praise. We shall not in doing this confine ourselves to what is strictly original in Dr. Wilson Philip, but give, as far as our limits permit, a fair miniature of the whole work.

The SYMPTOMS of indigestion may be conveniently and

naturally arranged under three stages. The FIRST STAGE is characterised by such symptoms as arise from food remaining undigested in the stomach and bowels, though their functions be otherwise healthy and natural. These symptoms are flatulence, distention, and disagreeable eructations; which indeed may at times occur in the healthiest individuals, although occasioning only temporary uneasiness. But when, from incautiously eating indigestible food, or from overloading the stomach, these symptoms frequently recur, the hitherto healthy state of the viscera is changed, and the secretions become disordered and unhealthy. The mouth is clammy, and the tongue white or brownish; the appetite is impaired; there is thirst; and the feet are apt to be cold. The first strongly marked symptom, however, is depression of strength, or great feebleness and langour, both of body and mind. The natural discharges then become altered. The fæces are either darker, from the bile being too copious or vitiated; or they are too light, from a deficiency of bile—sometimes indeed they become quite black. The urine is apt to deposit a pink or lateritious sediment, which experiment proves to indicate too much acid in the system; or it is turbid with white mucous-like flakes, indicating superabundant alkalescence.—When the bowels are loose, the urine is copious and pale, as is the case in high nervous excitement; when constipated, the urine is scanty and high coloured. The skin separates nearly the same sort of matter from the blood as the kidneys; and when from debility it becomes dry and torpid, or is constricted by cold, both the urine and the alvine discharge are in consequence increased. The symptoms arising from sympathy are innumerable: head-aches, dimness of sight, floating spectra, ringing in the ears, with pains and uneasiness in the extremities, are some of the most usual. Great care should be taken to distinguish between *debility* and *depression of strength*, as they require very opposite treatment. Recovery from debility must always be slow; while from depression, it may be rapid in proportion as the cause has been of short duration, or is easily removed.

The SECOND STAGE is characterized by a tenderness on pressure of the soft parts on the right side, in a spot about the size of a shilling, lying between the pit of the stomach and the bend of the ribs, and corresponding, as Dr. Wilson Philip ascertained by dissection, to the extremity of the pylorus. The patient is seldom aware of this till the physician points it out—an admirable professional secret, for gaining the reputation of skill and sagacity. When this tenderness is considerable, or has been of some continuance, the pulse becomes hard, but *to feel this we*

must employ the slightest possible pressure, withdrawing the finger till it barely touches the skin; for *much pressure will make even a hard pulse feel somewhat soft.* As the disease advances, the thirst increases—and instead of the hands and feet being chilly, they are apt to burn and flush—night or morning, sweats often supervene—and there is increased reluctance to motion and exercise.

In the THIRD STAGE, the secondary symptoms of the head, chest, bowels, &c. become the most prominent, and frequently lead to organic disease, which, singular to remark, never occurs in the parts primarily affected. It is thus that hydrocephalus, amaurosis, deafness, schirrous liver, and phthisis pulmonalis, as well as unhealthy ulcers, may arise from indigestion; while the stomach, which was first affected, recovers, or is apparently little affected, in the same way as a blister, which induces a secondary disease, will often remove a primary one. The principle is general. When extensive disease of the liver, for example, spreads to the lungs, the liver frequently recovers while the patient is sinking under phthisis. It is also an important remark, that nervous pains, such as that in the shoulder in hepatitis, and in the arm from chronic carditis, may at length, by continuance, produce inflammation and fever. The liability of one part rather than another to be affected with secondary symptoms Dr. Wilson Philip properly ascribes to original peculiarity of constitution, congenital weakness, irritability, or to accidental injury of *a part.*

In treating of the CAUSES of indigestion, Dr. Wilson Philip gives us first an account of healthy digestion; and no living author, we believe, has investigated this subject more profoundly, or more accurately than he. The stomach secretes a fluid somewhat like the saliva of the mouth, which has the power of converting the food into a uniform pulpy mass. When the food is thus prepared, the muscular movements of the stomach, propel it into the duodenum. This movement has been minutely investigated by the experiments of Dr. Wilson Philip, who killed upwards of a hundred rabbits in his researches, of which, a more detailed account is given in his work on the Vital Functions. His late public experiments at the Royal Institution establish his facts beyond question, as even his former opponents now testify his accuracy. He found that only the portion of food which is *spread over the inner surface of the stomach is digested and moved forwards,* a circumstance which had escaped Reaumur, Hunter, Stevens, and Spallanzani. The food which is in the centre, and at a distance from the gastric fluid, remains unchanged, till the removal of the portion digested, makes way for it

to be spread out in turn. This agrees admirably with the acute observations of M. Lallemand, *Quart. Journ. For. Med. III.* 88. Dr. Wilson Philip thinks hunger is caused by the gastric juice acting on an empty stomach, and he instances a healthy man, who, after having fasted twenty-four hours, upon taking an emetic and evacuating the gastric juice, had his hunger completely removed. How does he explain hunger's being increased by cold and allayed by heat?—When the food passes into the duodenum, it is mixed with the bile and the pancreatic juice, and reduced to chyle, which, as it is always of the same white milky appearance whatever food be taken, must be formed in a great measure from the bile and pancreatic juice, or at least must be greatly influenced by their chemical action. It follows from this (and the inference is most important), that any derangement of the liver or pancreas must be immediately felt in all the subsequent processes through which the aliment passes,—in the residuum which passes through the bowels (as well as in the blood), and the secretions derived from it.

The REMOTE CAUSES of Indigestion may be divided into those which affect the nerves, by whose influence the gastric juice is secreted; and those which affect the muscular power, of propelling the digested food from the stomach into the duodenum, the intestines, and the thoracic duct. Of the former, we may mention wine in every form, opium, and other narcotics, such as tea, coffee, and tobacco; hard study; indulgence in venery, and other sensualities; violent passions, &c. Among the latter, distention of the stomach is the chief. This may arise—from eating too fast, in which case more is eaten than there is fluid to dissolve; from high seasoning and great variety of food; from drinking wine during meals, in which case too much is eaten in order to satiate the overflow of the gastric fluid excited by the stimulus; and from eating food which swells much after it is taken into the stomach:—we say *much*, for all sorts of food swell more or less. Distention acts on the nervous power, and in this view may be ranked in the first division. Besides these, all extensive diseases in any part of the body affect the stomach by sympathy; and it is important to notice, that all sympathetic affections become causes, which support and aggravate the primary disease. For example, *indigestion causes debility of the skin, and this debility* REACTING *increases the indigestion.* It is this which so often protracts disease, and baffles the utmost sagacity and skill of the physician.

The IMMEDIATE CAUSES of a disease are the *most* important for the physician to ascertain. Before it was known that angina pectoris arises from the obstructed passage of the blood

through the heart, all sorts of stimulants and antispasmodics were given, because the symptoms resembled spasm! In the same way, indigestion is often still erroneously treated, from ignorance of the immediate causes. The immediate cause of the symptoms of the first stage is, the debility induced by the remote causes preventing a due change in the food, and affecting the stomach, the bowels, and the parts which sympathize with them. This sympathy is usually referred to a communication of nerves; but as many parts sympathize where there is no trace of such communication, Dr. Wilson Philip thinks with Abernethy, and other enlightened physiologists, that it takes place in the brain and spinal marrow; in the case, for example, of continuing to refer pain or cold to an amputated limb. Contact or contiguity of parts very frequently produces a diffusion of disease when there is no direct nervous communication, on the same principle perhaps as contagion from contact. In this way, he accounts for the liver being affected with disease of the stomach. The pain and tenderness in the second stage, he thinks, is an inflammatory state of the pylorus, and of the thin edge of the liver that lies over it and in contact with it; which affections go on to produce hard pulse and fever. This ought to make the practitioner wary, not to continue the treatment proper to the first stage, when the second has commenced, as he would otherwise infallibly aggravate the disease. Febrile and inflammatory diseases always begin with debility of the capillary or finer vessels, and consequent increased action of the larger vessels; while nervous diseases, on the contrary, begin with debility of the larger vessels, though this always ends, if the disease is prolonged in debility of the finer vessels, producing chronic inflammation most difficult to cure. This is the case with the second stage of indigestion, the access of which, as it can then only be effectually counteracted, ought to be watched with great care; for the disease has generally made progress, before the patient, unless closely questioned, is aware of his danger. In these circumstances, the state of the blood, and consequently of all the fluids, must be deranged and corrupted in consequence of diseased digestion, and this also must cause fresh disorders in all parts of the system. Mr. Abernethy found many wounds and ulcers, which resisted every other treatment, yield to medicines which restored and invigorated digestion. Dr. Wilson Philip very properly distinguishes between distention of the liver, and of the duodenum; the latter being felt lower down, and giving a different sensation to the hand.

The TREATMENT of indigestion must be begun by removing the causes above stated, and by attending to the due exercise, both of

body and mind, particularly to the exercise of the stomach. As to DIET, food should be eaten slowly, in order that it may be well mixed with the saliva; and not taken in too great quantity to oppress the stomach, as indigestion usually arises from the stomach being irritated, either by food not well masticated or by food of difficult digestion. It is of much moment, therefore, to ascertain what sorts of food are of easiest digestion; though, in some rarer cases, we are baffled in referring to general principles by constitutional peculiarities. The celebrated Dr. Gall could not eat mutton, however disguised, without suffering violent irritation. When the stomach is weak, the gastric fluid does not answer to be diluted with much liquid; nor does it agree with oily or ascescent food; in such cases, animal food and stale bread with spare drink, is best fitted for the patient. All mucilages are of difficult digestion, and therefore the flesh of all young animals which abounds in mucilage, except perhaps veal, is improper for weak stomachs. Food abounding in mucilage is popularly called *light, but this relates merely to its less tendency to produce fever and inflammation* than beef, or even mutton; and the same observation applies to the white sorts of fish. All food thus called light *is of difficult digestion*, but may be allowed in fever. Fat meat is the most oppressive; and of course pork, goose, and duck, are not proper for weak stomachs. That eggs disagree with the bilious is erroneous, if they are eaten soft boiled with stale bread. New bread is perhaps the most difficult of all substances to digest, as the paste which it forms presents an impenetrable mass to the gastric fluid, which, according to Dr. Wilson Philip's experiments, acts only on the surface next the stomach. The same remark applies more or less to all mashes and jellies. Mashed potatoes, for example, contrary to popular opinion, are always harder of digestion than when simply masticated. Simple roasting or boiling moderately is the only proper mode of cooking; all the refinements of the art beyond this are injurious. The concentrating of much nutriment in a small compass, as in beef tea, is seldom proper; for, *however strong it may be, it will not allay hunger in the least*, without the mixture of something solid. To prove this novel doctrine he gives an interesting case, and some experiments. Fresh vegetables, particularly peas, beans, cabbage, waxy potatoes, cucumbers, &c. are bad; mealy potatoes, turnips, brocoli, lettuce, &c. are less so. Butter, cheese, and all preparations of milk are oppressive, and generally so in proportion to their richness.

Water is the most proper fluid for diluting our food, and its quantity ought to be regulated so as not to over-dilute the gas-

tric fluid, nor to leave the food too dry, to prevent its solution. But this is not the main use of drink. It is chiefly important in supplying the secreted fluids, such as that of the insensible perspiration; and it is for this reason, when it is superabundant, (as well as in diarrhœa, in which the fluid secretion is so much increased) that thirst is strongly felt. In health, thirst is never troublesome; and it is, consequently, very erroneous in some to drink *copiously* during meals, for the purpose, as they think, of promoting digestion; though as they have no thirst, it is more likely that this will impair the powers of the stomach by over-diluting the gastric fluid. The patient should rather be sparing in his drink, as the want of the healthy fluids in the mouth and primæ viæ, *will often excite him to drink, when it would be injurious.* Other fluids besides water may have nourishing and other qualities; but when the contents of the stomach are very fluid, digestion cannot go on, for the gastric fluid mixes with the whole mass, rather than with the layer in contact with the stomach, and its strength is dissipated and lost, as it has no power unless it be in contact with the stomach. Soups and broth, when bread is taken with them, may be digested; but it is not the most suitable sort of food in indigestion; for if there is much broth, there will be too much liquid, and if much bread be eaten, a tough and indigestible paste will be formed. Soups, taken before other food, induce patients to eat too much. According to the prevalent habits of society in this country, alcohol is used almost universally, and can seldom be dispensed with, except the abstinence be commenced in early youth. We have, therefore, only to choose it in the least injurious form, which is as it exists in foreign wines. After distillation it is rendered more injurious; and beer and ale, if strong, are very improper for weak stomachs. Tea and coffee have been greatly decried by some; but it does not appear that facts prove them to be very injurious (when not drank too strong or too hot,) except in a few rarer cases. Their effects are but slowly perceived, but from their action on the nervous system, these must ultimately tell on weak systems.

Patients in indigestion should beware of too great variety in their meals, and, except in particular cases, should not take more than three or four moderate meals in twenty-four hours. Between meals nothing should be eaten: to be always taking something, is very injurious, as it disturbs the natural process, and produces weakness. When it is impossible to avoid this altogether, the bad habit should be gradually broken off.

Exercise both of body and mind is indispensable to the cure of indigestion. No part however of medicine, is, we are convinced, more improperly followed by the generality of patients.

The physician may, as Dr. Wilson Philip has done, give precise and positive directions for *moderate* friction; and moderate walking and riding on horse-back, to be persisted in daily for weeks, months or years; but according to our experience the patient in all probability will omit this regimen three days in four, and on the fourth, make up as he thinks for his neglect by fatiguing himself into a debilitating perspiration. This error is still more obvious in mental exercise. The languor of the mind, attending every stage of the disease, is not to be subdued, except by the most determined efforts; and the occasional excitement produced by attending places of public amusement, or by dinner or evening parties, will in the end aggravate, rather than allay the distressing bias to despondency. Travelling, and country excursions, with a cheerful companion, we should consider by far the best combination of exercise for both the mind and the body. Cool, dry air, and early rising, are also of great service, and are strongly recommended.

The more strictly medical treatment of the *first stage*, Dr. Wilson Philip has illustrated with much skill, by following up the enlightened views of Hamilton and Abernethy. After strictly pursuing the regimen just stated, the action of medicines on the stomach and bowels will be greatly promoted. He usually commences with an emetic, (not if possible to be repeated) followed by some of the milder purgatives or aperients, in order to unload the stomach and bowels. He thinks, and with justice, that emetics have lately fallen into unmerited neglect. When these fail to dislodge and clear away offensive and irritating matter, it is probable the secretions are deranged, and mild stimulants and aromatics may be tried, to promote a better action of the secreting organs. Alkalies are, of course, to be exhibited when acidity prevails; but their action is only temporary, and more animal food *if the patient relish it*, may be eaten; but this diet should not be carried to excess. Pains and spasms arising from acid irritation, if not thus relieved are combated by opiates; diarrhœa, by gentle purgatives, sudorifics, and astringents; vomiting, by soda water, or a mixture of sulph. acid; conserv. ros. and aq. menth.; and in more obstinate cases, by blisters, and opium, and camphor. Dr. Wilson Philip next considers the efficacy of mild stimulants and anodynes; bitters and astringents, with such medicines as maintain a healthy activity of the bowels; the first of which, soothe nervous irritation and excite particular functions; the second, tend to establish a more permanent vigour in the organs of digestion. He is, as we observe, an advocate for *very small doses* of most of the medicines, which he prescribes. In the case of stimulants and anodynes, he recommends very small doses of aromatic tinctures, *ammonia*

pure or carbonated, camphor, very warm water, applied externally to the stomach; opium and ipecacuanha, the last of which he praises highly in the form of the pulv. ipec. comp. from two to four grains every six or eight hours. A small dose of opium after dinner he has also found useful in many cases. Myrrh, castor, valerian, and asafœtida, he esteems more highly, in nervous irritation than we believe is now fashionable amidst the prevailing rage for innovation. Of bitters—chamomile, orange peel, calumba, cascarilla, and cinchona, are those on which he chiefly relies for perfecting a cure; combined with astringents, among which he properly places iron and sulphuric acid in the first rank. When the liver is deranged, mercury in the form of the blue pill or calomel, *in very small doses*, followed up by aperients, is to be tried; or the mineral acids, or dandelion may be substituted. Dandelion, we thought, was nearly an obsolete drug of the Boerhaave school. Every body knows the amusing scenes which Zimmerman had with Frederick the Great, in persuading him to take large doses of this nauseous and probably very inefficient medicine.* Even the name of Dr. Wilson Philip will scarcely, we think, have influence to restore it to much repute.

The *second stage* being marked by symptoms of slight or approaching inflammation, bitters and aromatics must be in-

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* A young friend on seeing this, suggested that every body does *not* know these anecdotes and as he may probably be right, we shall give one of the scenes, were it for nothing more than to show the manner of

A GREAT MAN TAKING PHYSIC.

"When I waited," says Zimmerrmann, "on Frederick, at eight in the morning, the remedy (dandelion) had not been taken; and I found in his majesty no traces of those good resolutions which he had formed the day before. As soon as I entered the apartment, he played off a battery of arguments against the juice of dandelion; but I combated them all with the utmost freedom, which was, indeed, a task of no great difficulty. Our conversation respecting dandelion continued still to grow more animated, and ended in the following manner:

"*Fred.*—I told you before that I would take your medicine but once a day.

"*Zim.*—In that case your majesty will have a very large dose to take at once.

"*Fred.*—How much?

"*Zim.*—Two or three spoonfuls.

"*Fred.*—I do not call that much.

"*Zim.*—So much the better. But two or three spoonfuls of the juice of dandelion, taken at once, may occasion sickness, and even vomiting.

"*Fred.*—In that case I will not take the dandelion.

"*Zim.*—What I apprehend, may not happen. Your majesty may begin by very small doses.

"*Fred.*—The slow method I dislike.

"*Zim.*—Your majesty may then take two spoonfuls at first, with a little fennel water which is friendly to the stomach.

termitted, till leeches, rubefaciants, and blisters, have in some measure reinduced the first stage, when the tonic treatment may again be cautiously commenced. As this stage is commonly a consequence of hepatic derangement, the liver must be attended to, by giving mercurials in very small doses, such as *a grain, or even half a grain of the blue pill, twice or three times a day,*

" *Fred.*—May I drink coffee soon after?

" *Zim.*—Half an hour after.

" *Fred.*—But is it not possible that dandelion may have lost that virtue which it had in the time of the Greeks and the Romans?

" *Zim.*—I know that plant and its virtues, not from books alone; I have used the extract of it for thirty years: *every spring I administer, perhaps, more than one hundred pounds of it in all diseases arising from obstructions of the viscera.* But, if what I say cannot convince or persuade your majesty, I beg that, in taking my prescription of dandelion, you will do with me as Alexander did with his physician, who, according to report, intended to poison him: 'Please to swallow this poison in my presence;' let your majesty then fix your eyes upon me, and you will see that I will not change countenance more than the physician of the great Alexander.

" This pleasantry seemed to make more impression on the king than all my medical reasoning; he fell a laughing in the most pleasant and agreeable manner, and said to me, in a resolute tone, 'I will take your prescription.' He then dismissed me with—'Adieu, my good sir. You will do me pleasure to return *after dinner* at three, provided it be not inconvenient."

" The king was, for some time, much pleased with his dandelion, though he once called it a *fiddle faddle* kind of a medicine. But Frederick, at dinner, paid little attention to those rules respecting his diet, of which he boasted so much in the morning. He first ate a large quantity of soup, composed of strong, and extremely hot ingredients; and he added to it, as usual, a large spoonful of ginger, nutmeg, and other spices. After this soup, he ate heartily of *bouilli à la Russe*, that is to say, dressed with a pint of spirits; and after this, an Italian dish, composed of the flour of Turkey corn and Parmesan cheese. To this is added the juice of garlic; it is then fried in butter, until a crust is formed upon it as thick as one's finger; and it is then seasoned with the strongest spices. This dish, invented first by Lord Marshal, and afterwards improved by the king himself, is called Polenta. In short, while boasting of the wonderful appetite which the dandelion had given him, his majesty ended his repast by eating a whole plateful of eel-pye, which was so hot, that his companion at the table told me and my wife, *that it looked as if it had been baked in hell.*

" The effect of the king's wonderful appetit began to appear even at dinner. The good humour and cheerfulness of the morning had vanished; his majesty fell into a slumber, and convulsive motions again appeared on his countenance. When he awoke, he had some retchings; and the company left table an hour sooner than usual. I had no reason to doubt, that Frederic had already cursed me and my dandelion a hundred times. The storm, however, was much more dreadful than I expected. At three I set forward to wait upon his majesty, as I had been ordered, very much discouraged, with some degree of peevishness, and I must freely confess, with a great deal of reluctance. His looks were, indeed, terrible. In the large

with which Dr. Wilson Philip has been successful, when larger doses and all other means had failed: when these doses, small as they were, proved irritating, he combined with them hyocyamus, conium, or extract. papav. As a substitute for mercury, more powerful certainly, than his *large doses* of dandelion, he recommends the cautious use of acids externally, as recommended by Dr. Scott. The dissertation on air and exercise which follows this, however good it may be, is apparently misplaced in the arrangement, and we suggest, the propriety of altering it in his third edition.

His remarks on TRAINS OF SYMPTOMS, which affect other organs, besides those of digestion, are equally valuable. These symptoms are most common, and most distressing in the liver, and the viscera near to it, producing cough, difficulty of breathing, and hard pulse; in the heart, producing pseudo carditis; in the lower bowels, producing pain and tenderness; and in the head, producing severe or dull head-aches, sometimes continuing for months, with affections of the eyes, ears, and face. These sympathetic affections, he treats on similar principles to those which we have already detailed, and need not repeat.

Upon the extensive subject of the *third stage*, Dr. Wilson Philip has been very brief. Indeed, he has done little more than reprint his admirable and well known *esquisse* on dyspeptic phthisis, as a specimen of the manner in which he could, and which, we hope, he may at no distant period be induced to treat this most important class of diseases. The field is, indeed, almost new, for though Hamilton, Abernethy, and their able followers have, as Dr. Wilson Philip has here given, most interesting and valuable glimpses into certain parts of it, yet a more extended and complete view of the influence of digestion in *all diseases*, is still a desideratum which nobody could supply more ably than our philosophic author.

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hollow of his cheeks, and on his lips. which were usually very beautiful and agreeable, I perceived marks of the deepest and most profound sadness. The first words which he spoke made me tremble. 'I am now,' said he to me,' only an old carcase, fit to be thrown to the dogs.' On hearing this expression, I replied, 'Your lower belly, Sire, is at present full and distended; to-morrow, when you have had a couple of stools, your wonted gaiety will return.'

"The stomach, the belly, and the imagination, which, for what reason God only knows, depends so much on the state of the two former, had more influence over this great man than one might believe. Bad digestion rendered him extremely dejected; but when that was over, his wonted vivacity immediately returned. His invincible incredulity in regard to medicine made him cry out, a miracle! when a remedy produced the least good effect; and when a physician foretold him the most trifling circumstance, he considered him as a prophet."—*Zimmermann's Conversations with the late King of Prussia, a little before his death.*—London, 1791.

From this brief and imperfect miniature, our readers may make some estimate of what Dr. Wilson Philip has done and what he has omitted. Amidst much that is not new, the single discovery of the mode in which digestion takes place, in that food only which is in contact with the stomach, and which after digestion is moved towards the duodenum, would alone place him in the very first rank of physiologists, and we were not a little surprised to observe an able anonymous writer almost claiming it to himself, when it is most evident, that he has not been "anticipated," but actually *instructed* in the secret by this very book on indigestion, which was open before him. (*Edin. Med. and Surg. Journ.* xvii. 590.) Another physiological fact which Dr. Wilson Philip has stated, though perhaps, not so clearly proved, is that the chyle is chiefly formed, not from the chemical or animal change of the chyme, but from the bile and pancreatic juice constituting a considerable portion of its substance.

As a practitioner, Dr. Wilson Philip exhibits a most striking contrast, when compared with many of those who are at present celebrated. His practice is almost uniformly, mild, alterative, and what would be called timid. He never ventures upon strong, or headstrong measures. To do something which will appear to his patients striking, by violent or sudden effects on the system, and either cure, greatly debilitate, or produce death, he has not the hardihood nor the rashness to attempt. He would rather work slowly, cautiously, and surely; foiling his enemy by husbanding his strength, and tiring him out by steady persevering efforts, than by hitting right and left at haphazard, and run the chance of altogether missing his aim. His maxim is, that if his very small doses do little good, that little is permanent; and they can seldom do much injury, which cannot be said of many of the strong medicines which are now in fashion.

To keep the medium, between rashness and timidity, is certainly, however, the most judicious line of conduct. In extreme cases, it would be the summit of insipid folly to tamper with inefficient measures; while in the chronic cases chiefly treated here by Dr. Wilson Philip, we should prefer his judicious caution, to forward temerity, and his gentle alteratives, to the powerful drugs too often, most injuriously exhibited. Mr. Abernethy, who is certainly the very reverse of a timid surgeon, set the brilliant example of this mode of practice, and in spite of the illiberal opposition which its novelty excited, its merits have established it, (we cannot say permanently, but we hope) till a better shall be discovered. Another striking characteristic of Dr. Wilson Philip's investigations, arising, indeed, from the former, is his avoiding rash experiments with new or untried

drugs, whose powers are either unmanageable or very difficult to regulate. We find no experiments by him with iodine, prussic acid, croton tiglium, and the numerous medicines which at present figure in experiment. Notwithstanding the charge of *cruelty* which has falsely been brought against him for his examination of *dead rabbits,* he seems to have too much humanity to sport with human life and human suffering, in the way which some dispensers of poisons, vegetable and mineral, have of late thought useful and therefore innocent. We should be the last to put a check upon improvement, by protesting against its almost only instrument experiment; but were the safe and humane model which Dr. Wilson Philip has here given, more universally followed, we have no doubt that much unnecessary suffering would be spared, and many lives saved, which now unquestionably fall victims to rash experiment, with novel medicines. Dr. Philip has also the very great merit of being wholly free from the French mania of name-coining, which threatens to deluge the science with a barbarous jargon of half Greek, half Gothic terms, often impossible to pronounce, and always unsightly when interwoven with our vernacular language. The disaster of Dr. M. Hall who nearly shipwrecked his clever book on a similar subject with the present, by coining for it, the outlandish title of an Essay on the *Mimoses,* will, we should think, be a warning to others to avoid hunting through Greek lexicons to find words for English ideas. The tide of fashion, however, is often irresistable, and even *we* ourselves are often reluctantly drawn within its vortex, and learn to talk in Greek, as may be seen in our analecta, when our English might be equally expressive. We hope, the time is not far distant, when we shall not be condemned to spend so much of our time in conning over new coined words, but shall have some leisure to learn ideas;—when pedantry, and the frippery and parade of nomenclature will not be called science, but useful investigations in plain English, like those before us, will take their proper rank above the idle folly of mere word-knowledge and name-making.

We have heard Dr. Wilson Philip accused of writing in a diffuse, rambling, and illogical style;* which charge, we conceive, means that he writes like a gentleman and not like a pedant, who has all his knowledge in a cabinet of tables, the compartments of which have no communications. It is not so in nature, and Dr. Wilson Philip with much good sense and good taste has followed nature, rather than squared his remarks and observations to a precision of arrangement, which only exists in the brain of a closet system-builder.

* Edinburgh Medical and Surgical Journal, ut supra.

CLARKE ON MORBID FEMALE DISCHARGES.*

WE seldom estimate a book by the elegance of its letter-press; for though we occasionally meet with both genius and good sense under a fine exterior—in all Wardrop's and Scarpa's books, for example, yet this seems scarcely more in character with a plain and practical work, than a court birth-day suit would be with a practical farmer, or a country apothecary. Besides, a fine book like this of Mr. Clarke's, is exceedingly apt to beget suspicions, that there is in it more of show than of what is useful; and what is no less apt to make us pause to consider, is, that fine printing and hot pressed wove, make a very serious addition to the price. But we must forgive the able successor of Denman and Osborn, as we cheerfully forgive Wardrop and Scarpa, for indulging their taste for fine books, when they give us so much valuable matter, that we can every day apply usefully in practice.

No organ perhaps in the body is liable to a greater variety of DISEASES than the UTERUS, and its complicated connections. Its outer membrane becomes liable to diseases of the peritonæum;—its muscular structure to irregular actions, and the formation of tumours, either in that structure or in the connecting cellular membrane; while the internal membrane, which from the small superficial arteries always secretes mucus, and occasionally the menstrual fluid, becomes subject to the usual diseases of mucous membranes, and is perhaps more liable to attacks of inflammation than any other mucous membrane in the body. The cervix of the uterus being glandular, is liable to the various diseases of the glands; while the vaginal membrane, as well as the preceding parts, may give rise to excrescences, and other forms of disease—all of which fall within the scope of our author's design.

The first part of Mr. Clarke's work on *the Diseases of Females attended by Discharges*, has now been before the world for seven or eight years, and has been very favourably received, and highly spoken of. His description and treatment of PROCIDENTIA UTERI in that volume are among the best practical observations, which we have seen on that threatening, unman-

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* Observations on the Diseases of Females, which are attended by Discharges, illustrated by Copper-plates of the Diseases. By Charles Mansfield Clarke, Member of the Royal College of Surgeons. Royal 8vo. London, 1821.

ageable, and by no means uncommon affection. He judiciously recommends, both in the incipient and the advanced stages, a strict confinement for some weeks to the horizontal position upon a sofa or a hair mattress—a down or feather bed being too soft and relaxing. He strengthens the tone of the parts by cold lotions, applied several times a day with a sponge to the back, abdomen, and pudenda; and above, all by injections into the vagina, and even into the uterus itself of a strong solution of alum, or of a decoction of galls, oak bark, or green tea;—zinc, and other metallic astringents, he finds, produce too much irritation. At the same time, he prescribes the usual regimen and medicines for invigorating the general system, namely, regular exercise and diet, with laxatives, bitters, and sometimes the cold bath.

The accoucheur is also much indebted to Mr. Clarke for his description in that volume of a VASCULAR TUMOUR, hitherto overlooked in books, but not unfrequently met with in the meatus urinarius of both unmarried and married females. This tumour arises from the inner parietes of the urethra, and is small scarlet red, very tender and sensible, and readily bleeds. It is attended by mucous discharge. As it is but slightly attached, he prefers removing it by ligature, which is usually accomplished in about twenty-four hours. If cut by the scissars, it is liable to be reproduced.

But we may not now stop to analyse a work, which we believe most of our readers already possess: we must proceed to the second part, which may have escaped their notice, a circumstance unaccountably incident to these works of Mr. Clark, for we find the Edinburgh Journalists, six years ago complaining that the work *(first part)* had "somehow escaped their attention too long;" and Dr. Copland in the Repository of last month, tells us that the second part had escaped his notice till then. Mr. Clarke in this part adheres to his former ARRANGEMENT of female discharges into mucous, purulent, watery, and sanguineous, subdividing mucous discharges into transparent and opaque or white; upon which distinctions he founds his diagnosis and treatment; and as we think judiciously, though the Edinburgh critics, allege his distinctions to be futile, because it is often difficult to discriminate mixtures of pus and serum, or to tell what is mucus or what is pus, as in the instance of catarrhs. But surely these sages would not treat in the same manner an incipient catarrh with serous watery discharge from the eyes and nostrils—as they would a chronic catarrh, with inspissated mucous or purulent expectoration. Upon this principle we hold Mr. Clarke's distinctions to be sound

and practical, and whoever shall disregard them must fall into the most pernicious mistakes. In the first part of the work, the author had treated very fully of the transparent mucous discharges: in this part he treats of the white mucous—the watery, and the purulent discharges.

I. THE WHITE MUCOUS DISCHARGE.

The WHITE MUCOUS DISCHARGE is characterised by an opaque white profluvium, easily diffusable in water, *rendering it turbid* and of the consistence of thin cream, or starch and water mixed without heat, though sometimes it is as thick as glue, corresponding with what comes away at the commencement of labour. It is readily washed from the finger, and is usually small in quantity. It is to be examined after the patient has been sometime quiet and at rest, otherwise it may be mistaken for transparent mucus, which may appear white and opaque from the entanglement of air, as we sometimes see the saliva at the angles of the mouth of hasty speakers. But this will not render water turbid, and will, by standing, become transparent as the air escapes. If the discharge looks milky there is some reason to think the disease of less consequence, particularly in women of strong passions.

The discharge belongs to *one* diseased state of the uterus only, and marks it with constancy—which state is probably an affection of the glands of the cervix, as the SYMPTOMS are referred to this part, and here also the patient complains of pain on pressure of the finger, or in riding, or in passing indurated fæces. This tenderness and pain on pressure is confined to the cervix, and extends not to the neighbouring parts. When no pressure is made the patient complains of pain in the back and the abdomen. The discharge often passes with the fæces, from being then pressed out, and is thence erroneously supposed by the patient to come from the rectum. A frequent desire to make water attends the complaint, as it does the early stages of pregnancy, when also the glands of the cervix change their action, though in this case the irritation goes off as soon as the cervix is blocked up, which happens about the eighth or tenth week. *This is a useful hint for the accoucheur to gain the confidence of his patient by predicting the time of this complaint ceasing.* It is to be carefully remarked, that though in the cervix there is no alteration of structure, no peculiar enlargement of the os uteri, no breach of surface, and that the membrane covering the cervix is in its natural state of smoothness and polish; yet it is not uncommon to find encysted tumours in

the neighbourhood, as in the labia and cellular membranes of the vagina, in consequence of the increased action arising from the disease.

The constitution is not frequently affected in this disease, and the general health is seldom deranged, though general irritation and fever do sometimes take place. Menstruation usually goes on naturally; but in some cases is accompanied with much pain. Women are most liable to the discharge between the age of twenty and the period at which the menses cease. How far it may be a forerunner of carcinoma Mr. Clarke ventures not to say, but he thinks it not improbable, that it may be so from both diseases being seated in the glands of the cervix, which is the most sensible part of the uterus, and the usual seat of cancerous affections.

The CAUSES of this discharge may be traced to whatever has a tendency to produce irritation or inflammatory action in the glands of the cervix uteri, such as the meatus vaginæ being too narrow for easy connection, debauchery, prostitution, and endeavours to procure abortion. Of the two first of these causes, he gives cases of considerable interest.

His usual TREATMENT is antiphlogistic, as indicated by the inflamed state of the cervix, such as local blood letting, (repeated if necessary) from the back or groins, by cupping or leeches; and where fever is present, by opening a vein. He also recommends a hip bath of 90 degrees, twice a day, or warm fomentations to the back and abdomen, with tepid water thrown into the vagina by a syringe. In plethoric habits he advises Epsom salts as a laxative; and in languid habits, castor oil with manna, and a draught at bed-time to determine to the surface, such as ipecacuanha and camphor, or carbonate of ammonia with aq. menth. suc. limon. et syr. cont. aur. For stranguary, large doses of opium (66 drops of laud.) and mucilaginous drinks. In more pressing cases, the catheter is to be used early, instead of trifling with nitric æther at the hazard of inflammation. The horizontal position is, with quiet, to be persisted in, till the cure is effected. *Astringents, which are so often ignorantly employed, are hurtful.*

When this disease however arises from weakness or *unequal distribution of blood through the system,* a cause well known to produce swelling and disease in other glands, as in the axilla, the breast, and the groin—the antiphlogistic treatment will only aggravate the affection, which must be treated with both culinary nourishment and medicinal tonics, endeavouring to invigorate the system, and equalize the balance of the circulation by cinchona, and the tinct. muriatis ferri. Determinations of

blood however, whether to the uterus, the chest, or the head, are often unmanageable and baffling.

Mr. Clarke digresses (and we like useful digressions), from the white mucous discharge to a disease somewhat akinto it—INFLAMMATION of the substance of the UTERUS, when impregnated. In this case, the tenderness and pain on pressure, particularly above the pubis, are present and *permanent*, but differing in *the milky discharge being absent*, and being accompanied with *occasional* pains, coming and going off like those of early labour. The body of the uterus differs from its cervix in not being very sensible, which accounts for inflammation in it being less acute, than from its unyielding muscularity we might expect. In the unimpregnated state, inflammation of the uterus is not so severe as in pregnancy, both from the viscus being of less extent, and from the nerves and vessels being smaller. Along with the permanent pain, are occasional severe paroxysms, as in other muscular inflammation, such as that of the stomach exciting fits of vomiting, and that of the bladder, stranguary. The constitutional symptoms are usually slight—sometimes there is vomiting, or a little fever; but the tongue has not the *slimy whiteness*, as in peritonæal inflammation: when the disease continues long, it is sometimes aggravated by this discharge becoming suspended.

In the TREATMENT of this species of uterine inflammation, general blood-letting will have little effect, unless the peritonæum, &c. be also affected. Mr. Clarke prefers cupping over the os sacrum, or a dozen leeches applied to the pubis or groins, promoting the bleeding by the hip bath; and repeating this in ten days, or between the periods of menstruation. With fomentations of camomile and opium, he exhibits small dozes of antimony, and a weak opiate in a saline draught, once in four or six hours; and also every other morning, a brisk purgative of magn. sulph. or soda tartariz. in infusum sennae, ordering the food to be light and *nourishing*, but not *stimulant*.

When AMENORRHŒA is present, means must be taken to restore the discharge; but in such cases nothing is more unpardonable in a practitioner, than an indiscriminate use of the general and local stimulants called emmenagogues, though popular nostrums of this kind are taken, without the practitioner's knowledge. *No disease admits of such uniform and general treatment*, without consideration of the patient's constitution and circumstances—even sulphur will not always

effect the cure of psora. To use the whip and spur in amenorrhœa, as is often done, both to weak and to plethoric patients, is exceedingly thoughtless and pernicious. The rule is, in all cases, to restore the natural secretion, by improving the general health; diminishing plethora in the sanguine, and invigorating the powers of the debilitated. Mr. Clarke illustrates this by fever, in which the bile becomes deficient, the mouth clammy, the skin dry and hot,—and the urine scanty; but when the fever subsides, these secretions, one and all, return. In such a case it would be madness to give mercury to excite the liver; diuretics to excite the kidneys; pyrethrum to excite the salivary glands; or heat to excite sweating. Yet similar is the practice of indiscriminately giving stimulants, such as myrrh and steel, in amenorrhœa. If amenorrhœa is caused by cold and fever, he prescribes quiet—cooling drinks,—and purgatives; if by luxurious living,—light bitters,—easily digested food,—and *proceeds by slow degrees to bark and steel, and by slower still to stimulants*, such as the general ones, ammonia, spices, essential oils, and wines; or the topical and local ones, sabina, lytta, hellebore, myrrh, electricity, and, where there is no organic disease, horseback exercise. Of electricity he speaks favourably, when exhibited not in sparks, but in shocks passed daily through the pelvis, from before and behind. Of the modus medendi of this we can affirm nothing. But *none of these remedies does any good till the general health be improved.*

II. Watery Discharge.

The WATERY DISCHARGE is characterised by transparency and want of colour, though varying in thickness by the varying quantity of albumen present. This discharge indicates either the cauliflower excrescence,—hydatids of the uterus,—or the oozing excrescence of the labia.

The CAULIFLOWER EXCRESCENCE of the uterus is described as a tumour exactly resembling the placenta, in structure and in feel, consisting almost entirely of arteries so much distended with blood as to look like the irregular granules on the upper surface of a head of cauliflower, which granules may be picked off from the tumour. It is covered by a fine membrane, through which oozes profusely the serous part of the blood, and, when ruptured, pure arterial blood, forming a copious discharge, and, of course, carrying off so much of the blood, as from the want of the terminal capillary veins, would be left to stagnate. The tumour, when it has been seen, which is rare, has appeared of a bright flesh colour. The tumour is not tender, nor very sensi-

ble. It is attached to the surface of the os uteri, and sometimes occupies its whole opening, but never can be traced into the cavity. Its growth is sometimes rapid, but this is much influenced by the power of contraction, or of delatability in the vagina; a narrow and muscular vagina acting as the repressing bandage in varicose veins of the legs, or pressure upon a naevus maternus. The tumour, after death, appears like a flocculent mass,—the blood which distended it having escaped, as also happens at death, to the vessels of the pia mater. This circumstance, and the impossibility hitherto of injecting the tumour, prevented the author from obtaining any preparation of it besides the pulpy, flocculent mass, till he succeeded in removing one by ligature, which remains perfect.

The CAUSES of this disease are still obscure, or unknown. It occurs from the age of twenty and upwards, in both married and unmarried women; in the continent and in prostitutes; in the poor and the rich; in the weak and the robust. May it not be analagous to aneurism in the larger vessels? or to the blood-red naevus? or may it not be congenital, and remain latent till puberty? May it not, in some cases, arise from marriage, and from pregnancy?

The SYMPTOMS of the cauliflower excrescence are most minutely and accurately given by Mr. Clarke. The first intimation of it is unusual moisture, which gradually increases, though unattended by fœtor or pain, till it induce emaciation and pallor, and is accompanied with occasional mixture of *bright red blood*. The discharge is in proportion to the size of the tumour, and the action of the uterine vessels: it may be a slight moisture, or may require the change of twenty or thirty napkins a day. Slight exertion, coughing, sneezing, straining at stool, and, most of all, connection, will rupture the vessels of the tumour, and produce bloody discharge, and this tends, of course, to diminish the watery discharge. As the disease advances, the system is weakened,—and of this the stomach soon partakes,—air escaping by eructation, or, being imprisoned, producing tympanitis, with symptoms of hysteria, and all the innumerable and inexplicable ailments which attend indigestion. In more advanced stages, oedema, hydrothorax, and sometimes alarming or fatal hæmorrhage. It is sometimes confounded with carcinoma; but the absence of pain will always give a clear diagnosis. The termination of the disease will almost uniformly be, sooner or later, fatal; but where the vagina is well braced and narrow—the tumour of small extent—and accidents guarded against—a patient may *enjoy* life for several years.

The TREATMENT, which should be begun as early as possible,

consists in diminishing the action and fulness of the vessels, in order to retard the growth of the tumour. The greatest reliance is to be placed on local blood-letting, proportioning the loss of blood to the quantity of the watery discharge, which always measures the extent of the disease; and the vessels of the tumour being unloaded will be less apt to be ruptured. Yet caution must be used when there is œdema of the feet, and other symptoms of great debility, otherwise injury must be produced. Leeches are too inefficient. All general and local stimuli are to be avoided, and the diet must consist of light puddings, white fish, and vegetables. In this, as in all diseases of the uterus, the bowels must be kept gently open with manna, or a mild saline mixture. The recumbent posture is to be insisted on, and the patient persuaded to it by *showing her the difference of fulness in the veins in the hand when hanging and when raised.* This is a very useful hint. Cold injections, and cold applied to the external parts, will cause the vessels to contract, and the tumour to decrease; but care must be taken, if the common syringe is used, not to carry it so high as the tumour: he prefers a syringe, of which he gives a plate, with the end rounded off, and armed with a piece of linen, two inches from its point.

In a CASE of cauliflower excrescence, where great debility had been induced by the discharge, the author recommended an astringent injection; but the patient soon laid it aside, in consequence of its being always followed by hæmorrhage. On inquiry it was found, that the pipe of the syringe had been improperly carried so high as to injure the tumour. The rounded syringe will be less liable to produce such an effect. As astringents, he prescribes zinc, alum, kino, sulphate of copper, galls, oak bark, and catechu. As the tannin, in some of these, coagulates all the albumen it meets with, the patient, if not put upon her guard, will be apt to be greatly alarmed. In bad cases, when the excrescence almost protrudes, the patient should lie with her nates raised, and the astringent fluid should be poured from an earthen butter-boat in between the labia. When it actually protrudes, compresses dipped in the fluid may be applied, or it may be wetted with a soft sponge. When mineral astringents prove too irritating, he prescribes decoction of oak-bark and linseed tea.

In cases of EXHAUSTION and great debility we must do something more than allay irritation and diminish discharges; we must recruit and support the system by light tonics, of which the best are the muriatic and sulphuric acids, given in decoction of cinchona. These are become so authorised by custom, in all cases of bloody discharges, that they are, by the ignorant, indis-

criminately and, of course, often injuriously employed. In abortion, for example, many do not take time to inquire any thing, but that the woman is miscarrying when she ought not; and prescribe, without reflection, sulphuric acid, infusion of roses, and laudanum; though *the acid, as a tonic, increases the muscular contraction* of the uterus to expel its contents, and *the opium, as an antispasmodic, takes off this contraction*, as it is known to do in strangulated hernia, and in the passage of gall stones and urinary calculi. Very small doses of sulphate of zinc, combined with an essential oil, may be used. taking care not to excite vomiting, which would prove injurious, by accelerating the circulation By such treatment, carefully pursued, most cases may be alleviated, and some may even be cured.

In the CASE of a lady, aged 32, the watery and bloody discharge produced great emaciation, palpitation, and slight œdema of the ancles, and she had increased the symptoms by tonics and stimulating diet. On examination, a tumour was felt, which, when pressed, bled, and though but slight, produced syncope. She was confined strictly to the sofa, and ordered copious lotions of cold water to the pelvis, and strong astringent injections. Wine was prohibited, and light food recommended; and five ounces of blood, by cupping, taken from over the sacrum. This treatment was repeated once in about six weeks or two months. In about two years after, the author saw the patient quite well; there had been no discharge for many months, and menstruation was regular. On examining, the vagina was found greatly contracted by the use of astringents: the os uteri was quite natural and healthy. This is a very extraordinary case. The almost miraculous cure must be ascribed to the astringents and the horizontal posture.

In another CASE of a lady, aged 40, a cauliflower excrescence, as large as a hen's egg, was attended with watery and bloody discharge, and had much reduced the system. The preceding treatment was followed with success till the patient imprudently undertook a journey, in which the motion of the coach produced alarming hæmorrhage, and she is obliged to have again recourse to the strictest treatment, and the discharge has now so much diminished, that there is a probability a favourable change has taken place in the tumour.

When astringents prove ineffectual, recourse may be advantageously had to a LIGATURE, similar to that used in polypus, but applied with more caution, lest bleeding be produced. The shield attached to the polypus canula is too weighty. After the tumour comes away, the vagina is to be washed out thrice a-day with cold water, and a strong decoction of oak-bark, with alum,

injected, and plugged in with a dosil of lint; or a weak solution of sulphate of copper or nitrate of silver may be injected or introduced on a piece of lint, so as to produce slight inflammation, and thus consolidate the diseased parts.

The CASE of a lady, aged sixty, gives a very complete history of this disease. The watery and bloody discharge had, for some months become so profuse as to induce general anasarca, and threaten death. The symptoms were of six years standing. A cauliflower excrescence was felt, nearly filling the vagina. By astringents, the discharge was much diminished in 1811; but in 1812 an alarming hæmorrhage came on, which lasted some days. In 1813 small pieces of granular flesh came away, with blood, and the watery discharge soaked more than twenty napkins daily. Hectic fever succeeded, and the tumour began to protrude outwardly, and on straining at stool splashes of arterial blood gushed out. As astringents had no effect, a ligature of twelve threads of waxed silk was passed round the origin of the tumour. On the seventh day the ligature came away, a small flocculent substance adhering to the canula, but no tumour was seen. The discharge ceased, and the patient got well, but was warned that the disease might return, which indeed happened in 1815. A ligature, at her solicitation, was again applied, and on the third day it came away along with the tumour, which Mr. Clarke immediately coagulated in alcohol, and keeps as a unique specimen of the excrescence. In a few months fatal internal symptoms came on, and the patient died; and, on dissection, a large osseous tumour, surrounded with layers of coagulated lymph, was found in the left hypogastrium, connected with the loins and the omentum. The uterus was larger than natural, and *a small flocculent substance was found in it.*

Vessicles formed in the uterus, from the size of a currant to that of a grape, and containing a limpid fluid, are called HYDATIDS. They grow from foot-stalks attached to a substance seemingly intermediate between blood and coagulating lymph. As their number increases, so does the capacity of the uterus, till it is over distended, and re-acts by contracting and endeavouring to expel them.

The CAUSES are not known. It is most usual during pregnancy, and often excites abortion; but it *may* arise in the unimpregnated uterus. It usually depends upon some unknown derangement of the coagulable lymph, and of the ovaria.

The SYMPTOMS are similar to many that attend pregnancy, such as retention of urine, constipation, œdema and cramp of the lower extremities; but these are not constant. When the

pelvis can no longer contain the uterus, it rises into the *cavity* of the abdomen. We should have thought Mr. Clarke knew better than to call the abdomen a cavity: he might as well call the head a cavity. *The distinctive characteristic of hydatids is an almost colourless watery discharge;* and this is distinguished from the discharge in cauliflower excrescence, which is constant by its irregular and sudden appearance and disappearance,—it being in fact caused by the rupture of the hydatids from coughing, sneezing, or the like. In the end, the hydatids are expelled by a process resembling labour, which is followed by most profuse and alarming hæmorrhage.

The TREATMENT can only begin at this last stage, for no mode of arresting the natural termination of the complaint has yet been discovered. The patient is to be told of this termination, and when it approaches is to be kept quiet in a horizontal position, and iced water is to be applied both externally and internally. The constriction of the uterus—the great remedy for uterine hæmorrhage, is to be promoted by a bandage round the abdomen, and by detaching with the fingers any hydatids, which may remain in the uterus. The whole hand is never to be introduced, unless the uterus be as much enlarged as in the sixth or seventh month of pregnancy, otherwise it may be torn and much injured. The suppression of the hæmorrhage is to be followed with tonics, such as cinchona and the mineral acids, and the same care is to be taken as after parturition.

There is a variety of hydatids consisting of a SINGLE CYST, which in the end is expelled without hæmorrhage, and the patient gets unexpectedly well. The symptoms are purely mechanical; and there is little treatment necessary, except supporting the abdomen with a bandage after the discharge. The disease is rare. Mr. Clarke never saw a case.—THE FLESHY TUBERCLE may easily be distinguished from the single hydatid by the difference of its feel; but the distinction is only important in prognosis. The mechanical symptoms are the same.

Our author is inclined to think, that DROPSY OF THE UTERUS is altogether a hypothetical disease, or that it has been confounded with the single cyst hydatid.

In the rare disease—OOZING TUMOUR OF THE LABIUM, which is coloured and reticularly indented, a watery fluid escapes from the surface or interstices of the tumour, and not a mucous discharge as in warty tumours of the same place. Blood is never discharged,—which distinguishes it from the cauliflower excrescence. The oozing is immediately renewed after the tumour is wiped dry; it is likewise increased by debility and dry weather.

It may be confounded with shingles; but is distinguished by the parts being solid, and never containing a fluid as in shingles. It never or seldom occurs before middle age. In the CASE of a poor woman, it produced so much distress, that it was thought proper to remove the labia, which effected a cure, the sores granulating and healing without trouble.

The TREATMENT consists in allaying the itching and sense of heat, by keeping the patient in the horizontal posture, and sprinkling the parts with powdered starch, mixed with cupri sulphas, finely levigated. Cold water, diluted nitrate of silver, and gum arabic dissolved in a decoction of oak-bark, are valuable remedies; but above all others, spirits—such as strong port wine, brandy, or even alcohol,—will control the discharge. The general health is to be invigorated with nourishing diet and wine.

We may confound INVOLUNTARY DISCHARGES OF URINE with watery discharges, if we do not attend to the peculiar smell, which is best perceived in the dry napkins. When this arises in pregnancy cases, hydatids, &c. there is no remedy; and *flat sponges sewed into the folds of a napkin ought to be constantly worn,* and the parts defended with a cerate of empl. plumb. cum ung. cetac. When it arises from a weakness or paralysis of the parts, stimulants may be used, such as tinct. lyttae. M. xx. and electricity, or artificial pressure may be made on the meatus urinarius by a globular pessary, constructed with a spring. When the parts are lacerated, a silver pessary containing a sponge should be worn.

III.—PURULENT DISCHARGE.

The PUS discharged from the uterus is usually scanty—heavy, yellowish, opaque, and little tenacious; and may either be secreted by an inflamed, or an ulcerated surface. In the first case, being mixed with mucus; in the second, often streaked with blood; for even absorption will frequently expose bleeding vessels.

When the MUCOUS MEMBRANE OF THE UTERUS secretes PUS, it escapes, and excites heat and uneasiness; besides, there is usually severe and constant pain in the back, and at the bottom of the abdomen, from the distention of the inflamed uterus. This goes on till a burst of pus takes place, and the patient gets well in spite of the unfavourable prognostics of the surgeon. The matter is retained by adhesive inflammation of the cervix or tough mucus filling up the orifice as in pregnancy. In the CASE of Mrs. B., aged sixty-five, there was a small bloody dis-

charge without pain, to which succeeded a scanty one, like fluor albus, passing afterwards to brown, and having an offensive smell. The os uteri was ragged and hard; and a large tumour bulged from the cervix. She had afterwards a violent attack of abdominal pain—and died. Purulent matter was found, both in the uterus and abdomen, and though the os uteri previous to death was impervious, yet after this, it admitted a probe, which shows, that matter may be retained in the uterus by simple contraction of its cervix. Another patient, aged forty, had violent inflammation of the uterus, which produced great enlargment of it, and also hectic fever, but in a few weeks a spontaneous burst of pus cured the complaint.

In a third CASE of a lady aged forty, the symptoms and termination of inflamed uterus were like the last, except that the discharge of pus was through the rectum. Mr. Clarke infers from this, that the pus had not been confined merely by contraction of the cervix.—In some cases of enlarged uterus, supposed to be CARCINOMATOUS, similar sudden discharges of matter sometimes take place in small quantity, and give temporary relief.

The TREATMENT recommended, is that usually followed in subduing inflammation; bleeding, purging, warm hip-bath, and, to allay pain, opium, or hyoscyamus. The distinction between simple inflammation and carcinoma, will make little difference in this treatment, though it will in the prognosis.—It is remarkable, however, that pus forms, and, of course, the uterus enlarges more rapidly than in cases of CARCINOMA;—it *never reaches the same size, as in the fourth month of pregnancy.*—When pus is suspected, a bougie, or a male catheter may be insinuated into the os uteri, and the matter drawn off.

When the mucous membrane of the VAGINA is INFLAMED, a sense of heat is first felt extending, from the orifice, as patients say, "up the body;" internal burning pain, and external itching are not uncommon; sexual feeling is increased; and there is frequent desire to make water, which is voided in small quantities with burning pain. If it arises from venereal contagion, the first symptoms appear in about forty-eight hours, sooner or later, according to circumstances. The discharge in gonorrhœa virulenta, is supposed by some to leave a deeper green stain on the linen than common pus;—but this Mr. Clarke thinks to be a mere fancy. The glands of the groin, sometimes, though seldom enlarge, even in (gonorrhœa benigna,) simple vaginal inflammation.—When there is no specific action, nor irritating cause, the disease terminates by a copious secretion and discharge of pus: venereal gonorrhœa may continue for weeks, or even months.

In young subjects, both male and female, purulent discharge from the urethra and the vagina, arises sometimes from distant irritation, such as dentition, and *by incautiously calling this discharge venereal,—(which if it were, would not alter the treatment)—practitioners have, more than once, greatly injured the peace of families.*

The CAUSES are referable to whatever excites inflammation in other parts, and more particularly, as the vagina, when not in a corrugated state, having an extensive secreting surface,—is more liable to be inflamed. Pressure during parturition may occasion it; but it most commonly arises from venereal contagion.

The TREATMENT, in simple and in venereal cases, may be nearly the same:—temperance, rest, care, avoiding stimulants, mild purgatives, mucilaginous drinks, and tepid bathing. Mr. Clarke has not found the bark to succeed so well as Dr. G. Fordyce, except in chronic cases of the discharge, when—with the resins, turpentine, and above all copaiva,—it is useful, joined with *astringent injections, which in females may be used sooner, and with less fear than in males, in whom it is thought they produce stricture.* As to the secondary symptoms of gonorrhœa, the author declines giving an opinion, while there is so much uncertainty; but he seems to think, any more than a very slight mercurial course, quite unnecessary.

Sometimes, but very seldom, ABSCESSES form in the labia and nymphæ in consequence of inflammation; and these go on discharging pus, *at irregular intervals*, rendering the neighbouring parts irritable, and reducing the strength. Profuse menstruation usually takes place. Abscesses of this kind do not, unfortunately, break at their lower and depending part; but at their upper part, where the heat and the action of the vessels is greatest, and this makes the case very troublesome to manage, for astringents or stimulants do no good, and from the difficulty of reaching the part, it would be hazardous to operate or to introduce a seton. In two CASES of this disease, coition produced relief by pressing out the matter from the opening in the upper part of the abscess. They were cured by invigorating the constitution and by local means, which he very strangely omits to describe. In another CASE he was quite unsuccessful.

The CORRODING ULCER of the OS UTERI usually occurs between forty and fifty-five, and is characterised by *the absence of all intermediate hardness or thickening of the parts.* The disease first attacks and obliterates the os uteri, then the cervix, and the body, all which is easily felt on examination. The SYMPTOMS first observed, are sense of heat, with slight yellowish

discharge, sometimes streaked with blood. The heat painfully increases, but there is no lancinating pain; there is soreness, but scarcely any pain from pressure with the finger. Violent hæmorrhages sometimes ensue. The complaint always terminates fatally.

In TREATING the disease, it is right to mention, that if the inflammation indicated by the sense of heat be timely subdued by repeated cupping or leeches, the ulceration may, perhaps, be prevented *ab initio*. The hip-bath of 94° is also recommended, or sponges dipped in warm water, or warm water injected,—the horizontal position being strictly enjoined. Neutral salts with any aromatic water, and conium, with tinct. opii, or hyoscyamus, subdue inflammation and tranquillize the system; but sarsaparilla in large doses, often deranges the stomach. The diet should be abstemious. In the latter stage, mild astringent injections will be proper.

He distinguishes CARCINOMATOUS ULCERATION from the preceding, by the presence of *a hardened or thickened structure*, and its earlier occurrence, which is between the ages of thirty and forty. At first, there is usually a puffy state of the external parts, with erisypelas and distressing itching, and desquamation of the cuticle and irritating furfuraceous scales, extending sometimes to the groins. The discharge, which at first is ichorous, and afterwards purulent, is not copious. It is fœtid, and sometimes streaked with blood, or mixed with small coagula. Hæmorrhage may also take place, so great as to cause syncope, and giving temporary relief. At this stage, the disease very often extends to the rectum, the bladder, and the urinary passage; the parts are corroded, and the fæces, the urine, and the discharge, now become intolerably fœtid, pass from the vagina, irritate the soft parts, and cause inflammation and sloughing. The general system, of course, becomes affected by hurried circulation, great emaciation, hardness in the coats, and diminished calibre of the arteries and veins. The stomach refuses, or rejects all food, bile is vomited, sores arise on the angles of the mouth, and the tongue becomes dry, glossy, and either pale or dark red, and the mouth and anus aphthous. There is burning heat of the stomach, with greedy and insatiable thirst. The patient is tortured by violent, acute, and darting pain through the pelvis, depriving her of all repose day and night. The disease terminates, though the period is uncertain, by the exhaustion of strength, caused by this accumulation of misery.

The disease is TREATED according as the patient is plethoric or otherwise, general blood-letting, repeated according to the symptoms, being employed in the first case, and local blood-

letting in the second, by cupping, above the fissure of the nates, to the extent of from six to twelve ounces, or by leeches, scattered about the pubis from groin to groin, or even introduced within the vestibulum.

This treatment must also be pursued, but with *great caution*, to prevent the deposition of new matter from thickening the parts, when ulceration is beginning or begun,—the indications of which, are accelerated pulse, increase of heat in the skin, and of the lancinating pain, flabbiness of the integuments, and softness, and shrinking of the muscles, with the discharge more puriform. *Blood in small quantities* may be abstracted with advantage in the very last stages. The spreading of the ulcer may be retarded by promoting cleanliness, and the absorption of the ichor, for which the hip-bath of from 86° to 94°, and syringing the vagina while in the bath, are recommended. He also recommends injections of strong decoction of carrots, or three or four drachms to the pint of water of extr. conii vel hyoscyami, or two drachms of opium, or half an ounce of extr. papav. to the pint of water. Instead of water-starch, or quince-seed-mucilage, may be made the vehicle of the sedatives, as this will make them adhere to the surface of the ulcer. If opium be used in enemata, the practitioner should carefully watch its effects, *as it has when thrown into the rectum, produced vomiting, syncope, and cold extremities.* Plasters, liniments, and lotions, with large proportions of opium, are of some advantage. Injections of acetic, or nitric acid, *in very small proportions*, are useful. In profuse and debilitating discharge, strong astringent injections are indispensable, such as alum, kino, decoct. cort. granati.; sulphate of zinc, and even nitrate of silver. All these remedies must be used, or not used, according to the necessity of the case, and he will be the best practitioner who best adapts the means to the end; but it ought to be a standing rule, *never to give a sedative of great power, when a milder will procure relief:* and to vary not only the medicine, but the form of it, as it is found to agree best. When opium fails, extr. stramonii may be tried. The author is apprehensive of belladonna, from having seen a patient nearly killed by two small doses.

When the RECTUM becomes carcinomatous, from its neighbourhood to the diseased uterus, tenesmus comes on, great distress on going to stool, and exquisite tenderness of the gut on touching it. When the disease attacks the BLADDER, there is shivering, heat, great pain fixed and constant, and stranguary;—and if it proceed to the abdomen, there will be symptoms of

peritoneal inflammation. In all these cases, local bleeding must, cæteris paribus, be employed.

It is quite possible, from the near neighbourhood of the one to the other, to mistake CARCINOMA OF THE RECTUM, for carcinoma of the uterus. The uterus is, however, the most frequently attacked; and examination will usually decide the point. When the finger is stopped in the rectum, by a thickened constriction, exquisitely painful, we need not attempt to ascertain the extent of the disease, for that will do no good, as we cannot operate here, and the most trifling carcinoma of the fourth of an inch, requires as much care, and will equally prove fatal with an extensive affection, from the effects on the functions. A large tubercle of the liver, for example, may long exist, without giving much trouble, while a small one, or the thickened heads of the tumours, compressing the gall ducts, will soon cut off the patient by jaundice, dyspepsia, or dropsy. The mesenteric glands may enlarge greatly, without producing more evil than debility; but if they enlarge, so as to press on the great blood-vessel of the abdomen, convulsions and death will ensue. Of such a case, Mr. Clark has a preparation. In the same way, a fourth of an inch of the rectum, constricted by carcinoma, will stop the fæces and cause death, as certainly as six inches soconstricted. The TREATMENT of this is precisely similar to that just detailed, as applicable to uterine carcinoma.

After so ample an analysis, we require not to say a single word in praise of this highly useful production, of which, every accoucheur should possess a copy.

PRICHARD ON THE DISEASES OF THE NERVOUS SYSTEM.*

BEFORE we proceed to Dr. Prichard's good things, we shall, as we are very friendly to him, exercise the highest privilege of friendship,—to tell him some of his faults. We object then, at the outset, to the greater part of his theoretical discussions;

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* A Treatise on Diseases of the Nervous System, Part I.; comprising, Convulsive and Maniacal Affections. By J. C. Prichard, M. D., &c. London, 1822. pp. 425.

not only as of little utility to the practitioner, and of less to support his own judicious practice; but as often unsound, and far from being intelligible, when considered merely in the light of philosophical disquisitions. Such may do very well to amuse his leisure hours of speculation on the Physical History of Man;* or when he is tired of Jablonski and Bryant and the hieroglyphics, may afford an agreeable variety to his Egyptian researches†; but in a practical work on diseases, such exercises of a philosophical fancy are sadly out of place, and the purchaser looks upon them, as nothing but useless lumber, among which he has to search and dig, for the only thing which he cares for —PRACTICAL FACTS. It indeed appears to us, that as far as his theories are just, he has illustrated them only by known common places; and when he attempts to step out of the common road, he very often goes astray. *Pathemata*, indeed, is a very fine word, but its only use, we conceive, is to skreen ignorance, and make us fancy that we know what we do not know. We should, therefore, advise Dr. Prichard, as the greatest improvement he could make, to leave out the whole of his theory in his forthcoming new edition; and supply the chasm out of the ample store of interesting cases, which we infer, from the specimens here given, he must still possess.

Another of Dr. Prichard's prominent faults, is the indistinct and involved arrangement which he has adopted. It is probable, his theory led him into the labyrinth; but be this as it may, we are certain, he would require the aid of his Egyptian friend, Hermes Trismegistus, and even of Isis and Osiris to unravel it. In our analysis, we shall follow a more obvious and simple outline; and we shall also avoid, as much as we can, the professional slang, in which Dr Prichard occasionally revels, though we marvel how a man of taste like him, who quotes Shakespeare, and Greek epigrams, should mar the clearness of his statements by borrowing such terms as *Leipothymia, Juvantia, Laedentia, &c.*, even from Sauvages, or Dr. Gregory.

But we must go on to what is practical in the book, and of this we think very favourably. His cases are particularly instructive and valuable, and full of acute observation, and accurate detail, while his practice is for the most part sound, and unexceptionable. We are, indeed, sorry that we can afford so

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* Researches into the Physical History of Man. By J. C. Prichard, M. D. &c. 8vo. 1818.

† See the Author's Work on Egyptian Mythology.

little space to this article, otherwise, we should have treated our readers with a more ample selection from these interesting cases; but we shall give the principles of his practice, and for the more minute details, we must refer to the work itself.

EPILEPSY.

THE more common form of epilepsy, is attended by sudden fits, total or partial loss of sense, or consciousness, and a convulsive agitation of the voluntary muscles of the whole frame. In the form of disease, resembling tetanus, which is less frequent, there are sudden fits of coma, without convulsion, but with what may be called a tonic spasm of the muscles, which become rigid and inflexible. There is a third form, which is akin to apoplexy; in which the muscles are relaxed, and the patient lies in a state resembling sleep, with the pulse as in syncope. This Dr. Prichard is disposed to call *Leipothymia*.

There is sometimes, a remarkable approach to hysteria—a distressing sense of inflation in the præcordia, for example, difficult respiration, palpitation, borborigmus, the feeling of a ball rising from the stomach to the throat occasioning a sense of constriction, accompanied with frequent micturition of pale urine; all of which symptoms of hysteria, occur in cases of genuine epilepsy.

Those symptoms, reckoned the most uniform, are sometimes wanting,—such as *the convulsions, and the subsequent stupor. Even the insensibility during the fit, is occasionally absent,* and this is regarded by Sauvages and Dr. Ferriar, as a characteristic of uterine epilepsy, but Dr. Prichard's experience is at variance with this. There seems to be a peculiarity in the state of the brain during sleep, which favours epilepsy. One patient of Dr. Prichard's, was almost sure to be seized a few minutes after falling asleep. He was a young labourer, rather of the apoplectic make, and had enjoyed good health till two years before, when he was suddenly awaked in the night by a spasmodic action of the muscles of the left shoulder, violently extending the arm, and drawing the head down to the shoulder: the whole muscular system was next affected. He attributed his complaint to his falling from a waggon, on his shoulder. If he dozed but a few minutes during the day, a fit would seize him. The treatment which was recommended, only served to reduce his strength.

We know a gentleman of nervous temperament, who almost regularly after he has slept for five or ten minutes, awakes with starting, often slight, but sometimes violent,—rarely like nightmare. This brief fit passes off, and he sleeps soundly for the

remainder of the night. He never had any thing like epilepsy, or somnambulism.

The fit of epilepsy, is sometimes accompanied with a raving delirium, as described by Dr. Mead; more rarely with somnambulism:—occasionally it ends fatally, one paroxysm rapidly succeeding another, so that the patient expires under their violence, or dies of subsequent coma: or it may terminate in palsy, mania, or idiotism.

The immediate CAUSE of an attack of epilepsy, is, according to Dr. Prichard, a preternatural flow of blood into the vessels of the brain, or a morbid distention and fulness in some of its vessels; and may arise from direct injury of the head; from suppression of discharges, such as the catamenia, or issues; from cold, particularly in the feet; from violent heat as in crowded assemblies; or from whatever produces too great determination of blood to the head.

This is inferred from the reciprocal conversion of nervous disorders, and their ascertained dependance on such a state of the circulation;—from circumstances giving rise to epilepsy, which evidently produce plethora, or an inflamed state of the brain: amongst the causes of which, are reckoned dentition, violent fits of coughing, and violent emotion. Muscular exertion, we would remark, seldom of itself produces epilepsy, because the motion of the blood, through the veins, is also accelerated by the pressure of the muscles; though this becomes a cause, when assisted by other circumstances. We have had under our care a patient, who attributed his complaints to hard labour, in sawing timber; but he confessed that he had been in the habit of drinking porter very freely, accompanied with the use of tobacco, which, as probably were the cause of the disease as the one which he assigned.

The beating of the carotid arteries, and the flushed state of the face during the fit, still more strongly prove the assigned cause to be just. The proof becomes stronger still on DISSECTING those who are carried off by a fit; in which case we find the brain red and turgid with blood, or serum effused into the ventricles; and sometimes organic diseases of different sorts in its structure, such as tumours, adhesions, ulcers, &c. But it must be confessed, that the brain is sometimes, though seldom, found quite healthy. To illustrate these causes a CASE is given of a girl aged nine, who had fits of tetanic epilepsy, induced by hooping-cough, which fits troubled her during four months. Sometime after, she was seized with partial paralysis of the right side; and subsequently with involuntary startings of the

limbs of the same side. She took half a drachm of the oil of turpentine three times a day, and a fortnight after was much better, but had occcasionally fits of vertigo. Under the use of the medicine, her limbs gained strength when she was seized with headache, and slight delirium. Leeches applied to the temples, and a blister, removed this latter affection, and she left the hospital free of complaint.

The apparent transition in this case, of epilepsy into vertigo, cannot, it is evident, be depended upon, as the vertigo might with more propriety, be imputed to the turpentine. In another CASE, which ended fatally, the lungs were found so gorged with blood, as to appear a sufficient cause of death; but the real cause was an extravasation of blood, by which the brain itself was lacerated. This shews the natural influence which subsists between the brain, and the respiratory system.

The TREATMENT of epilepsy is modified according to the causes supposed to produce it, but in all cases Dr. Prichard keeps the state of the vascular system of the brain steadily in view, and general and local blood-letting is prescribed, often to a very considerable extent. Purging, especially with the oil of turpentine, in dozes of half a drachm to two drachms three times a day. Blisters, applied chiefly to the back of the neck, cold effusion, saline and antimonial mixtures, and the whole of the antiphlogistic regimen. We should much suspect that indiscriminate depletion, and reducing the system upon the faith of the assigned immediate causes, could frequently lead to very injurious treatment. Blood-letting, and purgatives, and vegetable diet, may do very well with plethoric patients; but, though such constitute according to Dr. Prichard, a large proportion of those who are afflicted with the disease, he should certainly have taken into consideration the case of the debilitated, as well as that of the plethoric.

The SYMPTOMS of UTERINE EPILEPSY do not differ remarkably from those of common epilepsy, and are chiefly distinguished by the fits preserving the regular periods of menstruation, and not as Sauvages says, by the sex of the patient,—because females have also the other forms of the disease; nor by hysteric symptoms, nor the absence of insensibility, as he likewise affirms. Fits sometimes commence with the aura epileptica—at other times head-ache, pulsation of the carotids, and vertigo precede.

The CAUSES of this disease are referred in a great measure to action of the blood, diverted from the uterus to the brain. In supporting an ingenious theory of particular determinations of blood, our author remarks, that without such determinations

the functions necessary for the preservation and maintenance of the species could not be carried on. The fœtus could not be developed, the uterus would remain unchanged, and the mammary glands could not become enlarged. Hence, he infers, that particular determinations of blood are not incidental or insulated phænomena, but have certain relations to the general state of the animal economy; and that the equilibrium of the system, producing them is liable to partial disorders, so that they become at times pernicious.

In addition to this, if the flow of blood produced by such a determination is suddenly checked, there must either be some outlet substituted, or a morbid determination must, cæteris paribus, follow. The constitution, in the language of our author, is subjected to a sort of tumultuous action, irregular efforts take place, and disorders are induced in various functions, but no part of the constitution is assaulted more generally than the nervous fabric.

Those who are most subject to this disorder, are young females of the sanguine temperament, having fair and ruddy complexions, sandy hair, light eyes, and a delicate and irritable constitution. It appears about the age when the catamenia commence or soon after, and often makes its attack when their recurrence is prevented, or when menstruation is suppressed by exposure to cold—it takes place also after menstruation has been imperfectly and with difficulty effected, or where it has altogether failed at the proper age to make its appearance, in which case the disorder will generally continue, until the functions of the uterine system display themselves.

These remarks are illustrated by numerous cases, which constitute a valuable accession to practical medicine. In the following one the connection of the fits with defective menstruation is clearly evinced, as also the influence of blood-letting in the flow of the catamenia. A girl of sanguine complexion, aged 18, about two years ago, had fits, which came on almost daily, but ceased on the appearance of the catamenia, although this discharge was more scanty than usual. About six months ago the epileptic fits returned, the last took place two days after the cessation of the menses, the bowels were constipated, the pulse frequent and strong, and the tongue white—she had also severe pain in the occiput. After losing a pound of blood—having a blister applied to the neck, and taking opening medicines, the severity of the head-ache was mitigated. The bleeding was repeated and the purgatives continued, and in about a week after, she had little complaint, except a pain in the forepart of the head, which was relieved by leeches. After this she

was affected with globus hystericus, but had no return of fits. During the next fortnight, the pulse being frequent, she was twice bled, when the catamenia returned in a scanty degree, accompanied with pains in the head and giddiness, for which blisters and leeches were applied. After this treatment she had twice returns of the catamenia, but having much pain in the temples and vertigo, a seton was inserted in the neck, and she took a laxative antimonial mixture. As soon as the discharge from the seton became free, the pain of the forehead was diminished, and the vertigo removed. The menses again returned, although scanty, and also the pain of the forehead—she was again bled, soon after which the catamenia flowed naturally, and she was almost well. She was now discharged, but suffered afterwards relapse of the pain and sweatings, but not of the fits. The same remedies, with the addition of the warm bath restored her, and she was again discharged in a much improved state of health.

The TREATMENT of this disease is modified according to the circumstances of the uterine functions, from which it proceeds. In total suppressions, the morbid nervous symptoms are conceived to arise from the efforts of the system, to establish the natural discharge. The indication is, to relieve the morbid determination to the head by bleeding. This, when a decided effect is wanted, should be performed while the patient is sitting up, and the trunk supported in an erect position, until syncope threaten. When it is requisite to repeat the bleeding, it may be usefully accompanied by the hip bath of 96 or 98 degrees, or by merely bathing the feet. We cannot impress the utility of this practice too strongly on our readers, particularly as we happen to know, that a very opposite practice is followed by practitioners, who, thinking to strengthen the system, prescribe the cold bath *which can only aggravate the complaint, till the cause of the debility be once fairly removed.* We have known much injury done from this mistake. We question very much, however, the propriety of making the patient remain in the bath, till she begins to be fatigued and exhausted. The antiphlogistic regimen, of course, will assist in fulfilling this indication, though it ought to be persisted in with caution. The restoration of the natural discharge is frequently accomplished by this use of the lancet—the flow of the menses sometimes following very speedily upon the loss of blood. Stimulating clysters also have a strong exciting power on the vessels of the uterus. An excellent enema for this purpose, is composed of an ounce of the oil of turpentine, and an ounce of castor oil. Emenagogues also are mentioned, amongst which the oleum terebinthinæ is esteemed the

most powerful, the tincture of melampodium, and the pulvis sabinæ are sometimes efficacious, though these are not so strong as the turpentine. In order to render the constitution less liable to returns of amenorrhœa, and the accompanying symptoms of uterine epilepsy,—spare diet, exercise, change of air, gentle laxatives, setons inserted into the nape of the neck, or issues on the sacrum, or above the knees, are chiefly recommended.

In dysmenorrhæa moderate bleedings are prescribed, if any flow is existing, syncope is to be avoided—the use of the warm bath, and the other remedies as prescribed in cases attended with amenorrhœa. The effects of the warm bath, are increased by friction in the bath with flannel on the back, loins, and abdomen, and are afterwards maintained by fomentations of the feet and lower part of the abdomen, and draughts of diluent fluids.

Enteric Epilepsy may take place at every period of life, but like other forms of the disease is not so incident to the old as to the young. The symptoms are such as denote disorder in the functions of the stomach and the intestinal canal, namely obstinate constipation, or constipation alternating with diarrhœa, evacuations shewing unhealthy secretions and imperfect digestion, appetite variable and capricious, frequently unnaturally craving. The tongue is furred, and the skin sometimes covered with eruptions. The attack is often preceded by constant stupor, drowsiness, head-ache, dilitation of the pupils and vertigo. In children the causes of this disease are ior the most part dentition, producing disordered bowels. Both in children and adults, worms, especially the tape worm, from the irritation and the vitiated secretions which they produce in the alimentary canal, are a frequent cause of epilepsy.

The chief indication in the treatment is to remove the disorder in the bowels, relieving in the mean time, if requisite, the affection of the head, by unloading it of superabundant blood. Our author often commences by prescribing five or six grains of calomel, with one, two, or three of tartarized antimony: other purgatives and emetics are also liberally administered, and in obstinate constipation the injection of oil of turpentine is resorted to, aided by the relaxing influence of the warm bath. In protracted cases little can be done by cathartic medicines. A long continued diarrhœa exhausts the strength of the patient, and evacuates the intestinal canal of its more solid contents. A morbid secretion keeps up the irritation in the system; and a depraved appetite, a feeling of emptiness, or sinking with a perpetual craving, induce the patient to fill his

stomach with unwholesome substances. Flatulence, acid eructations, a sallow countenance, a foul tongue, and reddened fauces, are indications of this second and often very obstinate stage of the disease. In such cases, a few dozes of calomel are recommended to evacuate the diseased contents of the bowels, followed by rhubarb and magnesia; also the compound decoction of aloes three times a day, with half a drachm of the carbonate of soda.

In this, however, as well as in most other cases, the oil of turpentine is still the favourite remedy. The best mode of administering it is in emulsion, prepared by diffusing the oil by means of honey, or mucilage in some strong aromatic water—half an ounce of this, containing half a dram of the oil, is usually ordered to be taken three times a day in a cupful of milk. Dr. Prichard has not much confidence in the argentum nitratum, nor in any of the metallic oxides, although it is in this species of epilepsy, that he imagines they will be most likely to prove beneficial. The good effects of the oil of turpentine, are exemplified in the following case.

A girl of pallid complexion, aged 11, was seized with fits ten weeks ago, of which she had several during the day. At first she was convulsed during the fits, but now they have the character of uterine epilepsy. Pulsation full, abdomen tumid, bowels irregular. Her fits were stopped a fortnight ago by cathartics, and a dram of the oleum terebinth. every night, but the disorder returned. Six ounces of blood were now withdrawn, and cathartics ordered, which were continued for six days, during each of which she had a fit. Half a dram of the oil of turpentine was now ordered three times a day, and the cold affusion every morning. From this period the fits immediately ceased and did not recur. On this medicine disagreeing with her stomach, the dose was diminished to twenty drops, —afterwards increased to twenty-five, which she continued for a month :—she remains free from the complaint.

The origin of EPILEPSY FROM DISEASE OF THE LIVER, is less obvious than that from the uterus, or alimentary canal. It has, however, happened several times to Dr. Prichard to witness cases of epilepsy, in which on examination, the symptoms, which point out active inflammation, or those of chronic disease of the larger viscera, and particularly of the liver, were discernible. The REMEDIES adopted to remove the disease of the viscera, if successful, remove at the same time, or alleviate, the epileptic affection. From this it is inferred, that there is a connection existing between the morbid state of the viscera, and that state of the brain which gives rise to epilepsy. The treat-

ment is founded on the same principles as in the preceding varieties.

Madness.

The detail of the symptoms presents to us nothing worthy of remark. The history of this disease, like that already given of epilepsy, is accurate and comprehensive, and much discrimination is evinced in selecting and grouping those trains of symptoms, which lead to important views regarding its origin. In his considerations of the origin of this affection, he excludes from sharing in it certain intellectual phenomena, such as sensation, perception, and judgment, and confines the abberration to memory and imagination, conceiving that that feature which most distinguishes the lunatic, is a habit of mistaking the ideas of reverie for impressions of memory. When the maniacal hallucination becomes exalted to a very intense degree, it represents unreal objects as actually present; and some particular phantasms the creations of reverie or imagination, are presented to the mind in such vivid colours, as to produce a similar effect to that of actual perception—the patient in other respects making no mistake with regard either to place or time.

Certain changes in the configuration of the cerebral structure, being conceived by our author to precede, or take place in connection with every individual perception of mind, it is inferred that the impressions of memory are also preceded or accompanied by an organic operation, in some degree similar to that through the agency of which the idea was originally presented to the mind. It is next inferred that organic operations occur likewise in imagination or reverie, and that such are merely modifications of those of memory. In a diseased state of the brain, the distinction between them is conceived to be abolished, and hence the mistake which the maniac falls into of regarding the impressions of reverie as those of memory.

The brain on dissection of maniacs is found to exhibit the same vascular fulness and appearances of the effect of inflammatory action, as is found in those who die of apoplexy, and other nervous diseases.

The symptoms of uterine mania are irregularity in the returns, and a slow, scanty, and laborious flow of menstruation, great affection of the animal spirits, often assuming the character of hysteria—in other instances, maniacal impressions, unusual vehemence of feeling, and of expression, arising from too vivid impressions on the fancy. The causes are, suppression of the catemania from cold, over excitement, or powerful mental emotion, and irregular and difficult menstruation.

In the TREATMENT of uterine mania, more may be expected from stimulating emenagogues than in uterine epilepsy. Bleeding is not requisite, nor safe, to a large extent; although in some cases a considerable loss of blood, with the aid of the warm bath, walking exercise, &c. have removed the disease by restoring the natural functions. The treatment in other respects resembles that of uterine epilepsy.

In ENTERIC MANIA the SYMPTOMS are obstinate constipation; six, seven, and eight days frequently passing without any alvine discharge. The fæces often like coffee grounds, or chopped straw; not unfrequently of a dirty colour, and consisting for the most part of indurated bile, and marked by extreme fætor. Sometimes great torpor has been succeeded by diarrhœa, so that on inquiry the bowels are reported to be loose; this augments the evil. The abdomen, previously distended by indurated fæces, is now additionally swelled with flatulence, the load of solid contents being but partially discharged; sharp pains are felt in the abdomen, and there are marked symptoms of flatulence; dysentery, or hectic, at last frequently carries off the patient. The fauces and velum pendulum are red, with the vessels injected, and they are also covered with patches of mucus; the tongue is red, often with white streaks intermixed, when diarrhœa exists it is covered with a brownish hue. The mouth is viscid, and the patient generally spits out a frothy slime; ardent thirst also exists, and a peculiar fœtor of the breath, and of the whole person. The skin is clammy and cold. In cases of long duration there are scaly eruptions, and in debilitated subjects, furunculæ which are disposed to slough; the complexion is flushed; the eyes wild and glossy, with inflamed tunica conjunctiva, and the pupils contracted: the urine is scanty and high coloured and contains fœcal matter; the pulse is rapid and irritable, and the carotids especially, beat with unusual force; the patient is sleepless, irritable, and tremulous.

The CAUSES of this disease and the manner in which the brain comes to share in the diseased affection of the alimentary canal are not easily discovered.

The TREATMENT is directed to what is considered the primary affection: the bowels are purged with cathartic medicines in as powerful doses as the patient can bear, and continued until the full effect takes place. Purgative enemas also are used containing oil of turpentine and castor oil. General bleeding is not required in many cases, only when there are symptoms approaching to inflammation of the brain; such as raving delirium, a bounding pulse, especially in the carotids—flushed countenance,

reddened eyes, dry tongue, heated scalp, and intense thirst. The remaining remedies are the same as those used in enteric epilepsy.

Diseases of the viscera, especially of those lying under the hypochondria, have, from the earliest times been supposed to have great influence on the mind and animal spirits; but Dr. Cheyne was the first who pointed out the conjunction sometimes met with in dissection of HEPATIC DISEASE and MANIA. Instances of such union of disease have not frequently occurred to our author, though he gives a case, in which on dissection there was found organic disease, both of the liver and brain, the combination of which he was not disposed to believe accidental.

Our author subsequently treats of cerebral disease giving rise to epilepsy and mania, whether they may have arisen from wounds, or narcotic snbstances, or mental emotions. In his remarks on the treatment there is one which we think cannot be too much attended to, namely that morbid determinations to the head as well as to other parts often co-exist with a very defective degree of vigour in the general state of the circulation, and with an exhausted, or debilitated, constitution, In such cases the general health and vigour of the constitution must be promoted, while at the same time the congestion in the brain is relieved by topical evacuations, and the other usual means. In some cases the indications of cure are to strengthen the habit and to relieve the local determinations. Issues and other drains are particularly recommended. For the varieties in the treatment, and for the numerous excellent observations in this, and the preceding part of the book, we must refer the reader to the work itself; as also for the original views he has brought forward on the nature of local convulsion, somnambulism, and ecstasis.

We are sorry that our limited space forbids us to enter at greater length into the masterly practical observations of Dr. Prichard, and we must make the same apology for passing over his numerous and instructive cases, in which we found every thing to praise, and very little to blame. His theory we also pass over, though we had noted during the perusal of it, many passages for remark, and had even embodied these in a dissertation of some length; but for such speculations we fear our readers would owe us but small thanks. Those who are interested in the metaphysical questions respecting the influence of mental manifestations on the cerebral functions and organization and reciprocally; with the discussion whether the will is intelligent, or merely a blind instinct,—we must refer to the original work. We expect the second part with some anxiety, though we fear that the ample favours which fortune is reported to have

lately conferred on the author, may put upon his future exertions the deadening spell which so usually and so mischievously accompanies them. Omen Deus avertat:—we have so few medical authors like Dr. Prichard, that we can ill afford to spare him,—and that in the very dawn of his celebrity, as an original, a practical, and (what is still higher praise,) a useful writer.

BELL, SHAW, AND MAGENDIE ON THE NERVOUS SYSTEM.*

In a paper laid before the Royal Society. Mr. Bell has given an account of the peculiar views which he has been known for some time past to entertain respecting the nervous system. He considers it in man, and in the higher animals, to consist of two distinct systems of nerves, the simple and the complex. The simple is found alone in animals possessing only sensation and locomotion, as in the leech and worm. In animals possessing other functions the complex is superadded to the simple, and in such animals this is the source of the intricacy and perplexity which till now have involved our knowledge of their nervous system. The nerves belonging to the simple class in man are distinguished by having each a double origin, by forming a ganglion on one of their roots, by going out laterally, by being all muscular nerves governing the voluntary motions, and by being all exquisitely sensible. They are the nerves of the spine, and the suboccipital of the fifth pair.

Mr, Bell affirms, that organs performing a variety of functions have a separate nerve arising from a separate origin for each function—that the tongue, for example, being an organ of touch, taste, and speech, has distinct nerves, subservient to each of these functions. The system of muscles concerned in respiration, of which there are above an hundred, have all, in addition to their other nerves, a nerve of respiration which serves to govern, and to harmonize their action, so that the most remote are thus enabled to act in unison with the lungs.

These RESPIRATORY NERVES are the par vagum, the portio

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* On the Nerves: with experiments on their structure and functions. By C. Bell, Esq. Phil. Trans. 1821.

On the Nerves of the Face. By J. Shaw, Esq. in Brand's Journal XII. 231.

Journal de Physiologie Experimentale. Par M. Magendie.

dura of the seventh, the spinal accessary, the phrenic, and another of similar origin, which, after traversing the axillary nerves, passes to the muscles on the outside of the ribs. The anatomist, according to Mr. Bell, will perceive that all of these arise from the medulla oblongata, or upper part of the spine, and that none of them have a double root, or form ganglia at at their origin.

The portio dura of the seventh is termed by Mr. Bell the respiratory nerve of the face, because it governs the action of the muscles of the cheeks, lips, and nostrils, which are concerned in respiration. If this nerve be divided these muscles will cease to act in unison with the lungs, while their power of voluntary motion, and their sensibility will remain unimpaired; but if the branches of the fifth be cut, the portio dura being left entire, the reverse will happen—the muscles will fall down, losing their power of voluntary motion, and their sensibility, but still acting in unison with the organs of respiration.

To exhibit a proof of this, an ass was tied and thrown, and its nostrils confined so as to violently excite the organs of respiration, making the animal pant and dilate the nostrils. The portio dura was then divided on one side of the head, and the motion of the nostril on that side instantly ceased. The animal gave no sign of pain on the nerve being cut, and on being untied began to eat without the slightest impediment.

Another ass being tied and thrown, the superior maxillary branch of the fifth nerve was exposed. Touching it gave acute pain. On its being divided no change took place in the motion of the nostril, but the side of the lip was observed to hang low, and the power of elevating and projecting it was lost.

From each experiment Mr. Bell concludes, that the portio dura of the seventh pair is the respiratory nerve of the face. The action of the muscles in smiling has also been found to depend on the influence of this nerve. In the case of a man who had the trunk of the respiratory nerve injured, it was observed that his mouth in smiling or laughing was drawn very remarkably to the opposite side. The expression of a dog in fawning, by turning out of the edge of the lip, Mr. Bell thinks a modification of smiling; this power is lost on the portio dura being divided. By other experiments the facial expression of other passions is found to depend also upon this nerve; hence it is deemed the grand nerve of expression as well as of respiration.

The surgeon, it is thought, will be able to derive advantage from these new views in performing operations upon the face, as well as in observing the symptoms of disease. But it is the physician who will chiefly profit, by being enabled better to

distinguish between different kinds of paralysis; and in diseases of the lungs to mark the degree of the affection from observing the expression of the respiratory muscles. This is of the utmost importance in some insidious kinds of pneumonic inflammation, in which the pulse does not sufficiently indicate the danger.

By thus distinguishing and separating the nerves of respiration, the seeming intricacy in the branching of the nerves—their convergence to certain organs, their re-union and divergence, no longer a source of confusion, become now a subject of high interest. This crossing and re-union is ascertained to be for the purpose of associating the muscles into different classes, for combining them into subserviency to different organs, and placing them under the guidance of a sensibility more certain in its operation than the will.

Mr. Shaw assisted Mr. Bell in these experiments, and has adopted the same conclusions. In his remarks published in the Journal of Science, which are chiefly a repetition and illustration of these opinions, he has some interesting observations on the comparative size of the portio dura, and of the branches of the fifth in different animals. In man, in the monkey, and in the dog, its intricacy is in proportion to the number of muscles of expression. These are most numerous in the carnivorous tribes; while in the horse, ass, and cow, excepting a few twigs, which go to the eye and external ear, the whole of the respiratory nerve is confined to the muscles of the nostrils and mouth. There is a variety with regard to the camel, it being in that animal nearly as profusely spread out as in the carnivorous tribes. The anatomy of this animal, Mr. Shaw observes, is different from that of the greater number of quadrupeds. In the dissection of one which had been presented to his Majesty by Captain Lyon, the nerves of the neck, in number and distribution resembled those of a large bird.

As the proboscis of the elephant is an organ both of touch and respiration, it was thought that the dissection of it would afford a proof of the correctness or fallacy of Mr. Bell's opinion. An opportunity of dissecting a young elephant presented itself to Mr. Shaw, and the trunk was found to be supplied not only by branches of the fifth pair, as described by Cuvier, but also by a large branch of the portio dura.

M. Magendie has repeated these experiments, and has found the results to agree with what is stated by Mr. Bell, except so far as regards the influence of the suborbitary branch on mastication. He writes under the persuasion that Mr. Bell had found the power of mastication destroyed by cutting this suborbitary branch. M. Magendie's mistake on this point seems

to have arisen from his not understanding Mr. Shaw's language, when conversing with him at Paris on the subject of these experiments. The opinion of this distinguished physiologist regarding these will be seen from his concluding sentence:—The discoveries, he says, of Mr. Bell appear an important step gained in our knowledge of the nervous system: his work is a fresh proof, that experiment is the only method by which real progress in science can be effected.

Critical Remarks on Dr. Wilson Philip's Theory of Inflammation.

[From a Correspondent.]

The opinions of physiologists in this country concerning inflammation, coincide in one primary and important point, namely, that the vessels of an inflamed part contain more blood than in a state of health; but they differ widely in their manner of accounting for this circumstance. Mr. Hunter and Bichât, (for on this point there is no material difference between them,) treat of the increase of diameters of the vessels of an inflamed part, as an increase of action; the former, indeed, has gone so far as to call the process by which it is effected, "the action of dilatation." In fact, if we suppose inflammation to be a disease of increased action, and at the same time allow that the vessels of an inflamed part contain more blood than in the state of health, such an action of dilatation is the only means of reconciling the theory with the state of the parts. Dr. Philip on the other hand by what seems to us an unwarrantable and unfounded inference, brings forward the distention of the vessels as a proof of their being in a state of debility, either absolute or relative, and at once assumes it to be impossible that this distention should be produced in any other manner; but it is evident that in so doing he must reason on uncertain data, and that this, which is indeed the point at issue, stands as much in need of proof as any other phenomenon of the disease. There is also another circumstance not of less importance in his theory, which also rests on uncertain grounds; we mean that which relates to the increased pulsation of the larger arteries, consecutive to the supposed debility of the capillaries, and which he considers as depending on the increased action of those vessels. Now, we believe, that there is

no point of physiology on which the evidence is more perfect and decisive, than that which teaches, first, that the larger arteries have no share in propelling the blood; and secondly, that the pulsation to be felt in them is not owing to any alternate contraction and dilatation, but to the impediment which the finger. or any other solid body presents to the current of blood, impelled through the vessel by the action of the heart. The reasonings and experiments, however, of Bichât on the first of these principles, and of Dr. Parry on the second, are too positive and conclusive to be refuted or denied.

If Dr. Wilson Philip allows that the pulsation of the arteries in a state of health is produced by the impulse of the action of the ventricle on the column of blood contained in them, the free transmission of the current of blood through them being interrupted by local pressure, (for without pressure, though there may be locomotion of the artery, there is no pulsation;) he must also allow that an increased strength of pulsation must be effected by the operation of the same causes in an increased degree; for it would be illogical, and irrational in the extreme, to suppose that two different degrees of the same effect should be produced by, or depend upon, the operation of two different sets of causes. In the instance of the increased pulsation of the arteries proceeding to an inflamed part, it is a matter of common observation, that these vessels not only pulsate with more vigour than in a those of health, but also that they are considerably enlarged, (though Dr. Philip, perhaps aware of the consequence, denies this fact) and contain much more blood than usual; in truth, the increased pulsation is caused by the increased size of the column of blood impelled against the finger, or other compressing body, at each contraction of the ventricle.

We do not see then, how it is possible for Dr. Wilson Philip to deny that the large arteries, when pulsating with more than their usual vigour, contain an increased quantity of blood, and he himself considers this state of increased pulsation as a proof of increase of action. Here then, at once, are two of the main facts, or rather suppositions, on which he rests his theory of inflammation, totally inconsistent with each other. On the one hand, we are told that the increased distention of the capillary vessels is the necessary consequence of diminished action; and on the other, Dr. Wilson Philip must allow, no doubt unwillingly, that the increased pulsation, which he considers, and as we think, correctly, a state of increased action, so far as the increased size of those vessels is an active process, is caused by the increased distention, and cannot exist without it; so that in the one instance, the turgescence of the vessels (the capillaries)

depends on diminished, and in the other (of the arteries) on increased action; which is an absurdity. It might be, perhaps, attempted to remove this evident inconsistency, by supposing that the powers of the two different sets of vessels (arteries and capillaries) differed in kind; but besides that such a supposition is wholly gratuitous, and without foundation, it could not be employed by Dr. Philip to extricate himself from the dilemma in which he seems to be placed, for he has expressed his opinion that the difference of power between these vessels, is in its degree and not in its nature.

If we have as yet said nothing of the microscopical experiments which Dr. Wilson Philip has adduced in support of his theory, it is because we consider them on every account liable to very strong objections. In the first place it is unnecessary for us to do more than mention the universal distrust entertained of all such experiments. Hardly any two of those who have made the circulation, in the natural state, a matter of observation, agree in the account they have given of its phenomena.

The principal inference which Dr. Wilson Philip deduces from these experiments is, that the blood moves with diminished velocity in the vessels of an inflamed part. This is one of the points in his theory which has excited the greatest opposition; but though the facts on which he has grounded it are by no means adequate in point of precision to decide the question so completely as he wishes, it appears to us to be of secondary importance. In the view which we take of the affection, the main fact is, that the circulation through the part is increased: it is possible, though certainly not proved, that the blood may in an inflamed part move with diminished rapidity; but as Dr. Parry has shewn, the circulation through the part must be considered as being increased, until it be proved that the diminution of velocity, real or supposed, more than compensates for the increase of quantity. It is a fact, which admits of daily observation, that the arteries leading to, and the veins proceeding from, an inflamed part are more distended, and contain more blood than in their natural condition; the simple experiment which Dr. Parry has mentioned, of compressing the vein when in this state, and stroking out the blood between the point of pressure and the heart, when (the pressure being removed) the blood will be seen to resume its course with a rapidity fully equal to that in a corresponding vein in a state of health—this experiment, we say, fully proves that under ordinary circumstances the velocity of the circulation through an inflamed part is not diminished. Here again, therefore, we have two facts proved by the evidence of the senses of sight and touch, in opposition to Dr. Wilson

Philip's conclusions drawn from microscopical observation, and proving first, that the quantity of blood in the inflamed part is greater than natural; and secondly, that it moves with, at the least, its ordinary velocity. Is not the conclusion which Dr. Parry has drawn from them altogether irresistible, namely, that the amount or momentum of circulation in an inflamed part is absolutely increased? Besides the objections to the theory of Dr. W. Philip, it has been justly observed by Mr. James, in his recent work on Inflammation, that the results of the application of stimuli to the membranes of living animals, as observed by Dr. Wilson Philip and others, through the microscope, differ from those which actually attend similar applications to the exposed surfaces of the human body. Thus if the tunica conjunctiva be stimulated, as by the vinum opii, it becomes immediately red, without passing through any precursory stage, whilst in his experiments on the membranes of animals, Dr. Wilson Philip states, that when an alcoholic stimulus was applied, the result as observed through the microscope, was a diminution in size of the capillaries of the part, and of the quantity of blood passing through them, the velocity with which it moved being at the same time increased. If heated water, the rays of the sun, &c., are applied to the surface of the human body, we would ask, is the increased redness which ensues preceded by a state of unusual paleness? Every one must be aware that it is not.

Besides these facts in opposition to the theory of Dr. Wilson Philip, many and strong arguments may be drawn in favour of the opinion which supposes inflammation to be a process of increased action, from the analogy which exists between it and some other phenomena of the animal economy. The increase of size in the carotids of the stag, during the annual production of its horns, and the increase of the vascular system of the uterus during pregnancy, have often been quoted as illustrative of this point. Mr. Hunter has compared, what he calls the action of dilatation in the vessels of an inflamed part, to the increase in size of the uterus to accommodate its contents. To such examples we may add the active dilatation of the cavities of the heart to receive the current of blood, and probably the process by which antagonist muscles adapt their length to their respective motions. But in nothing is the approach to inflammation so perfect as in the phenomena of blushing, and the erection of the structures endowed with that property. We are in fact presented with nearly all the component parts, the symptoms of the affection We have redness, heat and swelling, and if either of these conditions proceeds beyond certain limits, not even pain

is wanting to render the comparison complete. That these processes depend on the actions of the vessels of the part, and not merely on their distention when in a state of debility, by an increased action of the heart, is evident from the circumstances that they may occur as the consequence of local excitement, without an augmented activity of the functions of that organ. But at the same time, the general increase of the force of the contractions of the heart by the causes which produce blushing, &c., gives us every right to infer that the changes in the capillaries of the part are of the same nature. With the physiological opinions entertained by Dr. Philip, viz. "that the vessels are endowed with a power which differs only in degree from that of the heart," we cannot see how it is possible to avoid coming to the conclusion above stated.

How is the pain felt in inflamed parts produced? It is generally referred to the mechanical effect of the distention of the vessels in compressing the nerves of the part. But surely such an opinion betrays a want of both physiological and pathological knowledge, and is indeed opposed to fact. We have pain, and of the severest nature without distention of vessels, and distention of vessels without pain. The most rational explanation is that which supposes it to be the consequence of the unnatural actions of the nerves of the part, conveying unusual sensations to the brain. It must be allowed, however, that even this theory presents some anomalies, such as the acute pain attending on the ulceration of cartilage, and other affections of parts of low organization.

We cannot be surprised that in the present state of our knowledge, it should be difficult to account for the increased temperature of inflamed parts. If we do not perfectly understand the manner in which the temperature of the animal frame is maintained during health, it can hardly be expected that we should be able to account for its aberrations in a state of disease. Doubtless the sensation of heat complained of is often illusory, and dependent less on a positive increase of temperature, than on an augmented susceptibility of the nerves of the part to impressions of every kind; but it is certain that the temperature is at least sometimes increased, and this fact seems to us to afford another argument in favour of the increased action going on in the inflamed part. Dr. Philip says, that inflammation is the only instance which can be produced, where increased action of the vessels could be supposed to cause an increase of temperature, but the phenomena we have before quoted, viz. the growth of the stag's horn, erection, and blushing, bear equally on this point. To these we may add an instance from the vegetable kingdom,

proving the general fact, that augmented temperature is connected with augmented actions in organized structures, namely, the very considerable increase of heat observed in the flowers of certain plants, at the period of the impregnation of the female by the male organs.

It is unnecessary to say any thing of that part of Dr. Philip's theory of inflammation, which supposes the increased action of the large arteries to be a salutary process, intended to restore the powers of the inflamed part; but he seems to be guilty of some inconsistency. He has before said, that the consequence of the application of stimuli to the capillaries, is the loss of their excitability and a diminution of action; but here we are told, "that the final cause of this symptom (the pulsation of the large arteries) is evident, viz. to promote the circulation in the part, and stimulate the debilitated vessels to action." How it is to produce this last effect, we are not informed. The question at once, however, falls to the ground if it be shewn, as we think it is, first, that the capillaries are not debilitated, and secondly, that the arteries take no active part in the propulsion of the blood.

Encyclopaedia Medica.

ON VARICOSE VEINS, WITH CASES BY E. A. LLOYD, ESQ.

To the Editor of the Quarterly Journal.

Falcon Square, January, 12th, 1822.

SIR,—As the safety, and therefore, the propriety, of dividing varicose veins, is still doubted by many respectable surgeons, and as an equal degree of uncertainty appears to exist among those who admit the propriety of it, about the best mode of performing the operation, and also as the nature of the diseases connected with a varicose state of the veins, does not appear to be generally understood, I am induced to send you the following observations and cases, which, I trust, will not be considered by the Readers of your valuable Journal, as an unimportant addition to this branch of surgery.

It will be recollected, by many of your readers, that a few years ago, a paper, by Mr. Brodie, was published in one of the

volumes of the Medico-Chirurgical Transactions, describing a new method of dividing varicose veins. The operation there described, is that which was employed in the following cases; and, therefore, all the merit that is due, entirely belongs to that truly scientific surgeon, whose name I have mentioned above. It is an operation which possesses, in my opinion, many and decided advantages over every other, that has been proposed for a similar object. It is performed with very great facility, occupying very little more time, than the common operation of phlebotomy; the pain which it occasions is commonly very little severe, and always but of short duration: it affords certain and almost immediate relief, in those painful and tedious ulcerations so often produced by diseased veins; and it is, I believe, when judiciously performed, perfectly free from danger. Before I became acquainted with this mode of dividing varicose veins, I really dreaded to witness the performance of any operation on them, as a fatal termination was so frequently the result; but now, whenever an operation is required, I proceed to perform it without any such apprehension. That I am justified in forming this opinion, I think, must be admitted, when I state, that I have performed the operation, in fifteen cases without any bad symptom being produced, and with the most complete success. In several cases, too, the operation was performed, not only once, but a second, third, and fourth time. I have operated also on the trunk of the saphæna major, as well as on the branches, and equally without any bad symptom supervening. When first I performed this operation, it was exclusively for the relief of those old standing ulcers of the legs, which I had always been taught to consider, as depending on a mere varicose condition of the veins; and as there were often several distinct varices in the neighbourhood of the ulcer, I selected, what appeared to be their trunk, and divided it in the manner directed by Mr. Brodie. In doing this, I hoped to remove, by one operation, the general varicose state of the veins below; but I soon found that I was attempting too much, and that it was essentially necessary to follow Mr. Brodie's plan, and to divide the varices themselves. I, moreover, was induced to believe, that the ulceration, or other disease of the common integuments, is not, as is commonly supposed, the effect simply of the distention of the veins, but that the varix itself first becomes diseased, excessively painful, and tender to the touch, and then, though not till then, excites inflammation, and consequent disease in the contiguous parts.

That the ulcers dependent on varices, are not occasioned by the simple mechanical action of the distended veins, must appear,

at least probable, from the circumstance of an excessively varicose state of the veins often existing for years without any ill effect whatever. The success attending the division of diseased varices, also proves the same point; for if the veins acted merely mechanically, it cannot be possible, that the obliteration of so small a part as is effected by the division of a varix, could, as we certainly often witness, remove the whole of the attendant disease: nor could the general varicose state of the veins remain (as is always the case after the operation) as great as ever without pain, or any other disease being produced. Another fact tending to shew, that it is not the mere distention, but the inflamed and morbid condition of the varix, which produces the disease in the common integuments, is, the obliteration of the varix, not being essential to the cure;—a fact which will be proved in the sequel. When, therefore, an ulcer is supposed to depend on disease in any of the veins, it is of importance to examine with accuracy the state of the veins immediately surrounding it, and if at any spot a varix, or one of the veins, be found painful and tender to the touch, the division of the vein, at that point, will generally be found most beneficial. When it happens that there are several varices in the neighbourhood of an ulcer, and that all of them are painful and tender to the touch, then it is necessary to make a separate section of each varix: but when, as I believe is most commonly the case, there are several varices, and yet, only one or two diseased, then it is sufficient, if only those which are diseased be divided. When the disease is of long standing, it often requires a very attentive examination to discover the diseased varices, unless they are in a very tender condition, as the cellular substance surrounding the veins becomes so much thickened, and the skin so much condensed, and deprived of its elasticity by repeated attacks of inflammation, that they no longer project outwards, as when simply varicose, but the leg, at the diseased part, presents a smooth surface, and appears as if the skin was tightly stretched over it. A careful examination will, however, generally enable us to discover the varix; but when the superincumbent cellular substance and skin, become thickened and diseased, the only evidence we have, is an obscure fluctuation being felt in the varix, by a finger placed above it, while with the other hand, the blood is impelled towards it, from the vein above or below. This, together with the pain and tenderness, will sufficiently indicate the situation of the varix, on which it will be most advisable to perform the operation. In other cases, in which the veins have lost their prominent appearance, their situation is easily ascertained, by the thickening of the cellular substance on

each side of them, which creates a feeling as if they were lying in a cavity with hardened edges. The one to be divided, is determined as in other cases, by the comparative tenderness on pressure, and without any reference to its being above or below the ulcer.

What is the cause of the inflammation which follows some operations on veins, does not appear quite evident. That the simple division of a vein is not the cause of the inflammation, is pretty clearly proved from amputations, and other operations being never followed by inflammation of the veins, except occasionally when a ligature has been applied, to restrain the venous hæmorrhage, or some other contingent circumstance occurs. It might à priori be supposed, that the inflammation, which so often takes place after the dividing or the tying of the saphena, was occasioned by something peculiar in the state of the vessel, as it is generally more or less varicose, whenever either operation is performed. But facts seem to prove that there must be some other cause, for when Mr. Brodie's operation is performed, it is always on veins much more varicose, and I believe often much diseased, and, yet, instead of any bad symptoms being produced the pain and inflammation which previously existed are speedily relieved. Now the advantage of Mr. Brodie's operation appears principally to consist in the small wound which it occasions, for the skin covering the vein being left entire, of course the divided parts will retract to a much less extent, and the wound being smaller will obviously require a slighter degree of inflammation to heal it, and, therefore, the danger of the inflammation being propagated along the course of the vein will be proportionably diminished.

That the same fatal result, as sometimes takes place, when the trunk of the saphena is divided or tied, may be occasioned by the division of the branches is proved, by a patient dying in St. Bartholomew's Hospital, of the inflammation which followed the division of a varix in the middle of his leg. In this case an incision was made down to the fascia, by which the skin and vein were at once divided, and afterwards the wound was carefully dressed in the usual method, but as alluded to above, in the course of a very few days, the patient died, and evidently from the effect of the wound. The symptoms were so precisely what are always seen attending inflammation of veins, that it would be needless to relate them here. Moreover, examination after death proved them to be produced by that cause. About the same time there was another patient operated on in the hospital, in the same manner, and though he ultimately re-

covered, most certainly suffered more severely, and a much longer time than he would, if the skin had been left entire.

Why the ligature and other modes of operating on the varicose veins, should be followed by more severe symptoms, must be so obvious to every one, that I shall not enter into the inquiry. Whether there is greater danger in operating on the trunk than on the branches of veins, it is not for me to decide, but I may add, that having twice operated on the saphena major, without the slightest bad symptom being occasioned, I should not feel the least apprehension in repeating the operation.

As some of your readers may not be acquainted with Mr. Brodie's mode of operating, I will briefly describe it. Mr. Brodie employed in the operation a narrow sharp-pointed bistoury, slightly curved, with its cutting edge on the convex side; but it appears to me that a straight bistoury, with its edge only so convex, as is necessary to bring it to a point, is a better instrument for the purpose, because if it is curved, its point is liable to run through the skin at the time it is turned, preparatory to dividing the vein. The operation consists simply in dividing the vein and at the same time leaving the superincumbent skin entire; and this is effected by introducing the knife, described above, between the vein and the skin, with one of its flat surfaces turned downwards, till it is carried completely across the varix, when the cutting edge is to be turned downwards, and the vein divided, the knife being withdrawn by the same effort.

After the varix is divided, the treatment I have always employed is very simple. It consists in abstracting at the time of the operation, as much blood as the patient can conveniently lose; the applying a compress to the divided varix, and a common bandage to the whole leg; the keeping the bandage wet so as to prevent any increase of heat in the diseased part, strict confinement to the horizontal position, and in particular attention to the diet, and to the regulation of the bowels of the patient. That strict attention to all these points is always absolutely necessary, I do not mean to assert, as my own practice has proved to me that it is not, but as the safer plan I should always enjoin it, unless there were particular circumstances to prevent it. How long it is to be observed must vary in different cases, but generally I have found a few days sufficient to keep the patient wholly confined to the horizontal position; but the roller should be continued for a much longer time. For fear of exceeding my limits, I shall not enter more fully into the treatment, but proceed to relate in as concise a manner as possible, the particulars of some of the cases in which I have operated.

The first case is that of a man, about 45 years of age, who

kept a vegetable stall, at Fleet-market, and who therefore was constantly obliged to be on his legs. Indeed it was a particularly unfavourable case, for the man declared that it was impossible for him to lie up for more than a day, and, moreover, his general health of body was very much impaired. The veins of both his legs were in an excessively varicose state, and connected with those on the right leg were three or four large ulcers, which had existed for thirteen years. In this case, in which my friend, Mr. Stone, of Argyle-street, kindly assisted me at the operation, I first divided the vein a little below the knee, when there appeared to be only a single trunk, expecting or rather hoping that by this means the vein would be obliterated, the weight of the column of blood diminished, and consequently the excessive distention of the varices below removed, as is stated to be the case, when the ligature is applied. About twelve ounces of blood were taken away at the operation, and a compress and bandage afterwards applied, and the treatment altogether as I have described. The wound caused by the operation healed at once, and did not produce the smallest bad effect. The immediate effects of the operation were to relieve the man of much pain, which he was constantly suffering before, and to produce a decided disposition in the ulcers to heal, although they had resisted every attempt that had been previously made, and especially tight bandaging and strapping, which I had myself applied for several months. These beneficial effects were, however, but temporary, for in less than a fortnight the pain in the leg returned, and the ulcers became again irritable and unhealthy, and the disposition to heal entirely ceased. At the point where the division took place a hard lump had formed, which evidently obstructed the passage of the blood through the vein, but above and below this the blood appeared to be perfectly fluid. The first operation not proving successful, a second was had recourse to. This consisted in the division of a large varix, which was tender to the touch, and communicated with an ulcer that was situated high up in the inner part of the leg. In this instance the treatment was the same as in the former, except that the man walked home directly after the operation, which was performed in the House Surgeon's apartments, at St. Bartholomew's Hospital. From this operation no ill effects followed, and the small wound occasioned by it healed in a few days. The old ulcer, too, connected with the varix which was divided, rapidly healed: and the varix itself lost all its tenderness, but the other varices remained tender as before. Two other ulcers also that were

lower down, and were in connection with the other diseased varices, were not at all benefited, which sufficiently proves that it was not the mere abstraction of blood, which was the occasion of the healing of the other ulcer. For the cure of these two ulcers two other operations were necessary, and subsequently the patient became perfectly well. That it is not the bleeding that cures the ulcer is further proved, by the fact of no such effect following those immense spontaneous hemorrhages, which so frequently take place from old ulcers of the legs depending on varicose veins. This case was moreover important in other respects. It shews that though the trunk of the saphena be obstructed, as when a ligature is applied, it does not necessarily follow that the varicose condition of the veins below be removed. It also first induced me to believe that the ulceration is not generally the effect simply of the distention of the veins, but, as I have stated before, of disease previously existing in the varices themselves, and thence propagated to the contiguous parts.

The next case proves almost the same points as the former. It is the case of Daniel Stoddart, who was a patient in Darker's ward, St. Bartholomew's Hospital, whose saphena major I divided just as it passes over the knee, and it particularly shews that the veins below shall remain pervious, though the trunk at one point be completely obstructed. In this case the veins of the leg were excessively varicose and distended, accompanied by an ulcer, and an extremely painful state of the whole leg. The ulcer was not the effect of a diseased varix, but of an accident which he met with nearly a twelvemonth before. It was, however, prevented from healing by the irritation which was kept up by the excessive distention of some of the varicose veins, and to relieve this the operation was performed. And so far it succeeded; for afterwards the pain at once subsided, the ulcer speedily healed, and the veins became much diminished in size, though they still remained somewhat varicose. No bad symptom whatever followed the operation, and at the point where the vein was divided, a hard lump, of the size of a large walnut, formed, and, as in the former case, the blood above and below it was completely fluid. Between one and two years after this patient left the hospital, I attended him with a gonorrhoea, and to that time the leg had continued perfectly well, and free from pain, and the veins diminished in size, though, as when he went out of the hospital, they were still varicose.

The following case proves, that though the varix be not obliterated by this division, yet its morbid condition will be removed, and at the same time the dependent disease of other parts.

Sarah Special, ætat 29, applied to me in June, 1818, on account of a large ulcer on the inner ankle, which had existed for above six years. It was extremely painful, and the skin around it was much inflamed and excoriated. The leg too was much swollen, and she informed me it constantly remained so. She had been in one of the Borough hospitals, and in the London Hospital for many months, but had never been able to get the ulcer healed. The pain occasioned by it was so severe, that she was altogether prevented from following any regular employment, and also her general health suffered very materially. Strapping and bandaging had been employed for months successively, but never produced more than limited relief, and that was only temporary, for as soon as they were left off the ulcer became as bad as ever. On examination, I found, just above the ulcer, a large and somewhat elevated varix, with a hardened margin, which was extremely tender. The skin above it was inflamed, and interspersed with ulcerated clefts. The veins of the leg were generally varicose, but at no other spot were they tender to the touch. This being the case I proposed to the patient the division of the diseased varix, to which she readily consented. I therefore divided it, and in doing this it was necessary, from the large size of the varix, to introduce the knife for above two inches between the skin and vein. About 16 ounces of blood were abstracted; the aperture was closed in the common manner, and healed by the first intention. The ulcer was subsequently treated in the most simple manner, and in less than five weeks all pain and appearance of disease were removed. I have seen this patient repeatedly since that time, and her leg has continued wholly free from pain and disease, notwithstanding she has been constantly actively employed. When I saw this patient last her leg was as well as ever it was, and the vein had no sign of ever having been diseased, though, as I have stated above, it was not completely obliterated.

Our limits unavoidably prevent the insertion of the whole of Mr. Lloyd's Paper in this Number.—Ed.

AN ACCOUNT OF AN EXTENSIVE NÆVUS MATERNUS OF THE LEG, AND OF THE APPEARANCES OBSERVED ON DISSECTION, WITH REMARKS ON THE TREATMENT.

(Read before the Hunterian Society, and communicated by GEORGE LANGSTAFF, ESQ. *Surgeon.)*

CHILDREN are frequently born with peculiar morbid appearances, which are denominated, from mistaken opinions as to their cause, nævi materni. Sometimes two or more nævi exist in the same subject; and they are situated in various parts of the surface of the body, but more frequently on the face, scalp, neck, and upper extremities, than on the inferior parts.

Morbid growths formed by an aggregation of enlarged arteries and veins ramifying in very loose cellular membrane, are of various kinds, and have been described by several authors, who have named them either from the nature of the diseased structure, or from the tissue in which they are situated. Mr. John Bell in his Principles of Surgery, Vol. I. has given a very accurate description of one of the most formidable varieties of this disease, which he has named Aneurism by Anastomosis, and Mr. James Wardrop has related some very valuable observations on one species of nævus, in the ninth volume of the Medico-Chirurgical Transactions. In that gentleman's preliminary remarks on nævi, he says there is another tumour frequently confounded with that described by Mr. John Bell, which is entirely confined to the skin, and to which the term nævus has been usually applied. He further adds, that this form of the disease might with propriety be denominated the cuticular nævus, in order to distinguish it from others. But the species which he has described, he says, has seldom been discriminated from the other two, and is formed underneath the skin, being situated in the cellular membrane, between it and the subjacent muscles. From its situation he has named this form of the disease, the subcutaneous nævus.

The nævus of which I am about to give the history, is of the kind most commonly met with, requiring surgical aid; but it differs from others which I have dissected, not only in superficial extent, but in having morbid connexions with several parts, dissimilar in structure; in this respect it appeared to combine the peculiarities of both forms of the disease as described by Mr. Bell and Mr. Wardrop.

CASE.—A delicate looking male child was born with a large and rather a prominent nævus, which occupied the principal

part of the integuments on the outside of the right leg. The skin covering the tumour was of that purplish red colour, which gives character to this disease, whether it is situated in, or beneath the cutis, and which leads to the detection of it. Pressure with the hand reduced the bulk of the tumour considerably, but did not occasion that temporary disappearance of the colour of the skin, which it generally does in these cases. On the removal of the pressure, the tumour resumed its figure.

The diseased part was not so moveable as we generally find it in nævi, but felt as if it adhered firmly to the parts beneath. There was slight diffused pulsation in the tumour, yet no distinct large arteries could be felt: the temperature of the skin of the part was higher than in any other part of the body, but it was not measured by a thermometer. As the child was very delicate and not likely to live, the parents refused the trial of any surgical treatment.

The tumour increased in rotundity surprisingly for the first month of the child's life, having acquired the magnitude of half a common sized orange; the skin was of a brighter colour; the temperature was higher, and the pulsation stronger. Shortly after this period, the child's health became more deranged, and a disordered state of the bowels terminated in an obstinate diarrhœa, which continued a fortnight, and carried off the little patient on the eighth week after birth. During the violence of the diarrhœa, the size, heat, colour, and pulsation of the tumour were greatly reduced.

Dissection of the Limb.—The skin covering the nævus after the removal of the limb from the body, and even after the separation of the cuticle, by putrefaction and maceration, presented a cherry coloured-redness: the tumour now felt spongy, but rather solid at its base.

A pipe was placed in the popliteal artery, which was large, and the limb was injected with size and vermilion. Although the slightest force possible was employed to the piston of the syringe, lest the injection should be forced into the vessels so as to rupture them, and cause effusion, yet, this did take place, for the tumour was distended to the utmost size, which it had acquired during the life of the child, even before the lower parts of the leg were made red; and the injection escaped from numerous superficial arteries and veins, where the thigh had been separated; as well as into the cellular substance, thus lessening the quantity of fluid in the tumour.

The extent of the external portion of the nævus, was from the outer part of the knee-joint, to within half an inch of the external malleolus, in front it covered the inner edge of the

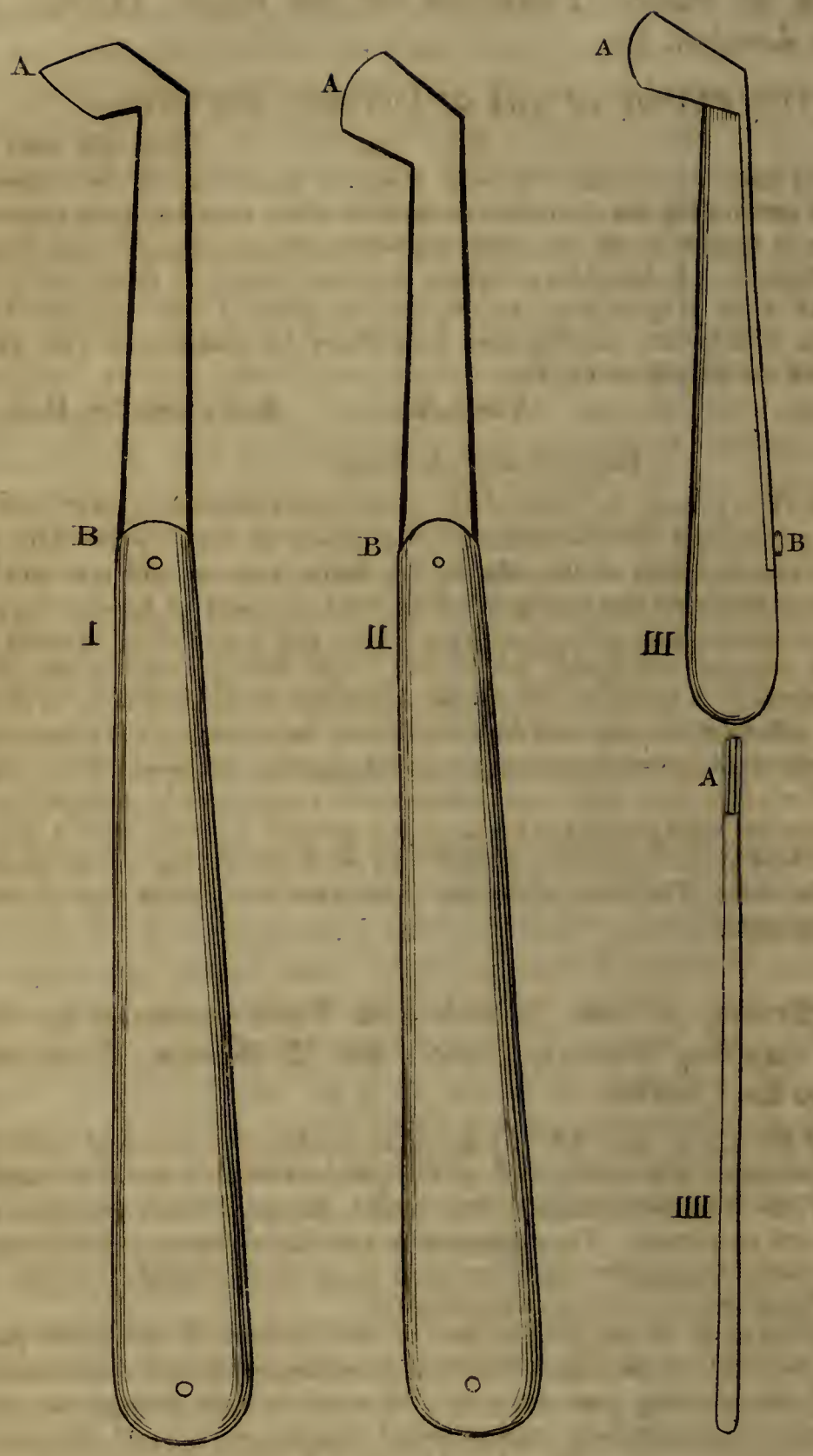
tibia, and stretched posteriorly over the greater portion of the gastrocnemius muscle, forming a tumour of a roundish figure.

The sound integuments were carefully reflected to shew the disease, which was situated principally beneath the adipose substance, and appeared to be formed of a congeries of arteries, veins, and cells, connected together by highly vascular reticular membrane, adhering so firmly to the adipose substance, and under surface of the skin, covering the nævus, as to make them one inseparable mass. The diseased part was also firmly united to the fascia, particularly to that part of it covering the fibula.—The fascia throughout the extent of the nævus was thickened, of a bluish black colour, and extremely vascular. The upper portions of the tibialis anticus, extensor pollicis, and extensor digitorum communis muscles, were also of the same morbid hue, which the fascia of the leg exhibited: there was a very firm adhesion between the under surface of the fascia, and cellular membrane covering the gastrocnemius muscle.

The nævus was principally supplied with blood, from the muscular branches, given off by the anterior tibial artery, which were greatly enlarged, and extremely numerous; it was also assisted by the external articular, and the arteries given off by the popliteal, previous to its division into the three arteries of the leg. The posterior external cutaneous nerve, was firmly united to the diseased parts.

From the great extent of surface which this nævus occupied, and its intimate connection with the deep seated parts, as observed in the dissection, I think it will be admitted, that removal by excision, would not have succeeded; and if this had been attempted, amputation of the leg would, in my opinion, have become indispensably necessary. Perhaps the plan of treatment recommended by that scientific surgeon Mr. Abernethy in cases of nævus, might have proved successful in this: at any rate, had the parents permitted surgical interference, it would have been deserving of trial, the part affected being so favourable for the application of a bandage.

The carotid artery was tied, by Mr. Travers, for an aneurism by anastomosis in the orbit, with success; but I think it doubtful, whether the ligature of the femoral artery in this case would have effected the cure of the disease; the operation would, however, in my opinion, have been justifiable, in the hope of preventing the removal of the leg, which, in the event of the failure of the means which I have mentioned, seemed to offer the only prospect of preserving the life of the patient.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On an improved Gum Lancet, by B. DE SANCTIS, M.D., *of the University of Rome, Licentiate of the Royal College of Surgeons, London, &c.*

TO THE EDITOR OF THE QUARTERLY JOURNAL.

Jan. 25, 1822.

SIR,—Having lately had occasion several times to make use of the common gum-lancet, for performing the operation in children when their teeth are troublesome in cutting, it seemed to me very unmanageable and even dangerous in lively and obstinate children. I therefore ordered a new one, which, I think, in every respect will answer the purpose much better, and of which I take the liberty of sending you the description, accompanied by a Plate for insertion in your next Number. I have the honour to be, Sir,

Yours, &c. B. DE SANCTIS, M.D.

Description of the Plate.

Figure I. and II. represent the form of the gum-lancets commonly used; and it is not difficult to account for the different dispositions at their upper edge, A, the blunt blade, can turn only on the side B, for being kept at different angles with the handle, and closed after using between the two plates of bone. Figure III. and IV. represent a side and a front view of the new gum-lancet, as made to order by Messrs. Simpson and Smith, 55, Strand.—The least pressure on the part A, propels by means of a spring B, the blade, contained in the sheath A, so as to cut the gums in whatever manner and direction it may be required. It is scarcely possible that any other occasional pressure could produce the same effect. The instrument is all of steel, very light and manageable; and it may be enclosed in a case. To exercise the hand nothing is better than a thimble covered with a piece of sheep-skin, where you may cut in a similar way as in operating on the gums, over or round the teeth. The price of the new instrument without the case is three shillings and sixpence.

Case of Deformity of the Mouth and Neck produced by the cicatrices rssulting from a Burn. By M. BOYER, Principal Surgeon to La Charité.

The subject of this CASE, aged 56, had fallen on her face into a pan of burning coals. The consequence was a deep burn of this part and of the front of the neck. In the course of the cure, which lasted four months, the precautions necessary in such cases were not employed. The consequence was the formation of adhesions and bands, with such inconvenient cicatrices, that the patient resolved to submit to any thing that should relieve her from this situation.

When she applied to M. Boyer, the left half of the opening of the mouth had disappeared by the union of the lips. The right commissure was also much nearer to the centre of this opening than natural. So small was the passage that this woman could only take liquid food, and pronunciation was so difficult, that what she said could scarcely be understood. A red and firm band of a triangular shape, stretched between the sternum and the chin, kept the head in a state of constant flexion. The lower eyelids were entirely destroyed. In their place was seen a red surface moistened with tears, which the obliterated puncta were no longer able to absorb. In addition to this picture it is to be mentioned that the face was in every part covered with a rough unequal cicatrix.

The deformity alone would have been of little consequence to a woman of this age; but as it impeded important functions, M. Boyer sought to restore the extent of the mouth and the mobility of the head. For this purpose he had two silver hooks made, in order to draw the commissures of the lips outwards when their adhesions were divided. The hooks were fixed to straps which buckled together on the acciput.

To support the head a corset was constructed, to the front of which a steel plate was attached, which could be elevated and depressed at pleasure, and fixed by a screw. This plate was connected with another piece of steel, the upper extremity of which terminated in a crescent, padded with leather, and accurately adepted to the chin.

Provided with these auxiliary instruments, M. Boyer, on the 22d June, made four transverse incisions in the band between the chin and the sternum, penetrating through the whole thickness of the cicatrix, and about half an inch asunder. The separation of the edges of these incisions was at first but inconsiderable, as the bistoury divided the cicatrix, which was as firm as cartilege, with difficulty, and with a grating noise. The adhesions which united the lips, were equally firm and thick. M. Boyer made the mouth rather more extensive than he wished it to be after the cure, well convinced that it would not fail to contract. He then proceeded to the application of the hooks and the corset, having first filled the newly made incisions with dry lint.

On the third day the wounds of the neck were in a state of suppuration. The head was kept in its place by the apparatus. The wound nearest to the chin was extraordinarily enlarged; it was now of the size of a crown piece. The commissures of the lips were covered with a slight slough. The patient, whose courage is admirable, complains but little. She takes liquid food only, and through a spout.

By August the patient spoke with facility, could introduce solid food into her mouth, and chew it; could raise the head to the vertical position, and turn it to every side without difficulty.

Mr. H. Earle's *case of restored Urethra.**

John Whitaker, by falling with one leg on each side of a boat, greatly injured his urethra. Six years after he was attacked with sudden retention of urine, and extensive effusion into the cellular substance, followed by gangrene and sloughing, which destroyed about an inch of the integuments of the perineum, and of the urethra. This his surgeon attempted, unsuccessfully, to restore, by uniting the integuments over a cathetra. When he came under Mr. Earle's care, there was a smooth cicatrix where the sloughing had occurred, and through the opening both the urine and semen was discharged; the meatus above this, particularly behind the scrotum, having become contracted, and approaching probably to obliteration. Mr. Earle, in order to alleviate the great inconvenience which the man suffered from the discharge,—undertook the bold operation of restoring the canal from the parts of the cicatrix and of the neighbouring integuments; and he details, at great length, all the minute steps of the operations (for there were two), and all the difficulties which he had to combat and surmount. He was at last successful in restoring the passage so completely, that the patient could perform all his natural functions nearly as well as before the accident. The case differs from similar ones by Sir A. Cooper, in the new canal having been formed from the callus of a cicatrix and not from sound integument.

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* Re-establishment of a canal in the place of a portion of the urethra which had been destroyed. By HENRY EARLE, Esq. Surgeon to the Foundling, and Assistant Surgeon to St. Bartholomew's Hospital. *Phil. Trans.* 1821, Part II.

Medical Schools of CORK *and* BELFAST.

We understand that of late regular courses of Lectures have been delivered at Cork by Dr. Woodroffe, on Anatomy, Surgery, Midwifery, and the Theory and Practice of Medicine; and that there are other facilities of instruction for the Cork Students, of Medicine, in the Lectures on Chemistry, Natural History, Natural Philosophy, and Agriculture, delivered at the Institution, by Mr. Edmund Davy, Dr. Taylor, Dr. Willis. and Mr. Tisdal. We should take it kind were any of our Cork correspondents to favour us with a more particular account of this infant and promising establishment in the metropolis of the south of Ireland. Dr. Woodroffe, who seems to be a clever, enterprising man, and, as we are informed, an excellent lecturer, also gives popular courses on Physiology, and the Anatomy of Painting. We wonder why Dr. W. has the whole monopoly of lecturing—We are also informed (but we have no details) that there is a similar rising establishment at Belfast, the metropolis of the north of Ireland.

Mr. Barlow's *Case of Cæsarean Operation.**

Mrs. Ridgdale, aged 42, who had had several children, fell in labour at the full period of gestation. For several years she had suffered much from general debility. and a softened state of the bones of the pelvis had been induced. Mr. Dugdale, who attended her, found it impossible, from the state of the parts, to deliver the child, though the head presented favourable, and he attempted to use the perforator, but on trial the head of the child receded out of reach. Mr. Barlow and Dr. Chew were accordingly called to a consultation, and it was determined by them, and agreed to by the woman, that the child should be extracted by the Cæsarean section. Mr. Barlow operated, and began a longitudinal incision, (which was seven inches long), three inches above the umbilicus, and two inches, on the left side, carefully cutting through the muscles of the abdomen in a line parallel to the *linea alba*, by which the uterus came into view and appeared in close contact with the abdominal parietes through the whole extent of the wound, from which a small quantity of serous fluid escaped. A corresponding incision was then made into the uterus, and also through the placenta, for if this had been detached, they were afraid of hæmorrhage. The child was now brought into view, and extracted alive. The placenta and membrane were then brought away, and during the contraction of the uterus the bowels protruded through the wound, but were soon returned and preserved in their situation by the integuments being closed by the interrupted suture,—adhesive plaster,—and a roller like the T bandage. She never complained during the operation, nor seemed disposed to syncope. She lost only about twelve ounces of blood. Alarming sicknsss and vomiting, however, soon made their appearance, and she died 62 hours after the operation.

Professional Degradation.

It seems that the surgeons of convict ships, before they can receive their pay, are obliged to produce a certificate from the principal surgeon of the colony, stating, "that no unnecessary expenditure was made of the necessaries supplied by the voyage." There is something very degrading in this requisition; for every surgeon, before he obtains his pay is obliged to make affidavit "that the medicines and necessaries have been faithfully expended. Now why is this second affidavit required, unless the previous oath of the surgeon is distrusted? Why subject a professional gentleman to such unnecessary degradation?

Reid's Two Voyages to New South Wales, p. 292-3.

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* From Essays on Surgery and Midwifery, with Practical Observations. By James Barlow, Surgeon, 8vo, London, 1822.

Professional Eclat.

"Dr. Granville has arrived at his house in Saville-row, from Wilton, the seat of the Earl of Pembroke."

"We are happy to learn that the Countess of Pembroke is declared out of danger. Dr. Granville, who had been sent for express to Wilton-house on Thursday night, arrived in town yesterday morning, having left her Ladyship in a fair way of recovery."---*Mirror of Fashion, Morning Chronicle, Friday, Feb.* 15, 1822.

CRITICAL CHARACTERISTICS OF NEW BOOKS.

I.—*A Manual for the Student of Anatomy; containing Rules for displaying the Structure of the Body, so as to exhibit the Elementary Views of Anatomy, and their Application to Pathology and Surgery.* By JOHN SHAW. 12*mo. London*, 1821. *p.p.* 342. 10*s.* 6*d.*

Mr. SHAW has, in this excellent little work, given the substance of the Demonstrations which he delivers to the students in the School of Great Windmill-street. We call the work excellent from its almost unique plan of directing the attention chiefly to those parts of Anatomy which are useful; and passing over in a cursory manner the more unimportant subjects. The whole is illustrated, as Anatomy always should be, with numerous references to Physiology, Surgery, and Morbid Anatomy. We wonder, indeed, how these ever came to be omitted; and we marvel more that there are persons so bigotted in pursuing the square and rule systems as to object to the plan altogether.—(See pages 75 and 76 above.)—Such persons are like the cabinet naturalist who only knows the labelled specimens in his drawers; but when taken to the fields he discovers that nature and he are totally anacquainted. We recommend the book to every student.

II.—*Essays on Female Economy.* By JOHN POWER, M.D. 8*vo. London*, 1821. 4*s.* 6*d.*

Dr. POWER, unfortunately for himself, labours under the mistake, that the starting and maintaining of "New principles" and singular theories is the high road to celebrity. It never was so in practical medicine, and least of all in the department of midwifery, which is so mechanical a business, and has so long been reduced to fixed principles; and it is much less so, *at present, when all theories, in every branch of science, are looked upon with suspicion, if not with ridicule.* We observe that Dr. P., in the Prospectus of his Lectures on Midwifery, carefully mentions that he will illustrate his peculiar views. Is this judicious? is it professionally politic? We advise him for his own advantage to renounce these singularities and keep to the beaten path, and we have no doubt his steadiness and ingenuity will do him credit. But so long as he hints that he thinks *Menstruation a disease which has been induced by the habits of civil life*, and so long as he recommends the abdomen to be stroked down in parturition, we are sorry we cannot praise him; though we shall cheerfully do so, whenever he renounces what we conceive to be more allied to fancy than to sound practice.

[Having already exceeded our limits, we are reluctantly compelled to delay several interesting and important cases, &c. which we intended to have given, till our next number.]

THE

Quarterly Journal

OF

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1822.

THE EDITOR'S WAYS AND MEANS.

TO CORRESPONDENTS.

Such of our Correspondents as favour us with Reviews, will be careful not to patch them with extracts; but to give, from the work reviewed, a clear and connected outline of all that may be practically useful at the patient's bed-side, in the fewest possible words; so that each review may appear as a distinct treatise, without the lumber of useless theory and idle speculation.—Such as send us *Characteristics* of Books, must give a fair estimate of their usefulness, as this department is intended as a guide to Country and Colonial Purchasers, who cannot, except by ordering them, see the Works characterized.

We shall take it kind in Mr. Wallace, of Dublin, to favour us with the sequel of his important paper as early as he can; the 12th or 15th of June is the latest day we could insert it in the Number for July.

We should consider the case of Sir H. H. with the original letters of the great Cullen, as very important; and if Dr. J. Hume, the able President of the Clydesdale Medical Society, finds it convenient to send these, or any other papers, we should esteem it a great favour. We shall take an early opportunity to write to him.

Nothing could be more gratifying to us than the interest taken in our undertaking by the President and Members of the Medico-chirurgical Society of Glasgow. The promised contributions we should highly value.

We have also to make our best acknowledgments to Mr. R. Hosie, Mr. James Brown, Mr. Aaron, Mr. M'Farlane, and Mr. Macalpine. We shall write to them in a few days.

We have received from Mr. Coombs, of Bath, an description and drawings of an ingenious improvement in the Aneurismal needle, which we should gladly have inserted, were it not that our subscribers have complained of our being too partial to Aneurism, and similar branches of surgery. We must for this reason at present decline the paper.

Mr. J. Stringer, of Dublin, has mistaken the word, "repeated" (*Quart. Journ.* p. 22, line 35,) for *performed*. We say there, that we have not heard of the operation having been "repeated," except once, since Mr. Travers's case in the *ninth* vol. of the Med. Chir. Trans. Mr. S. refers us to the *seventh* volume for cases in which it was repeated. He must mean *repeated backwards;* but we thank him for his good intentions.

A correspondent from Edinburgh says we have inserted the names of some deceased lecturers in our list of the Scottish Medical Schools, but he has not condescended to mention who.

Another correspondent, evidently a contributor to the New Edinburgh Review, is kind enough to set us right as to the famous school-boy Review of Goldsmith's History of England: It was not, it seems, the original school-book, but the *additions*, which were reviewed. He also says we have erred in saying there are a hundred faculties of the mind, for there are *just thirty-two neat!*

W. M. is informed, that we never pay postage for trifling cases, which are evidently intended by the writer to puff his own practice.

We thank Mr. ——— for the excellent case of Scrotal Hernia, treated by Mr. Tucker: and for his other able papers, which we shall take an early opportunity to insert.

Mr. De la Garde has our best thanks for his friendly communication.

We received a very polite letter from Dr. Renwick, of Liverpool, though we were at first somewhat appalled at the formidable sabre on the seal. We thank him for the book, which we have again perused; but are sorry to say, that we think, from his own shewing, Miss M'Avoy must have been—we will not say an imposter, but—deceived perhaps herself in regard to her alleged miraculous powers of vision. We recollect, that this seemed to be the uniform opinion of many of the best informed people, both medical and literary, in Liverpool, when we were there about two years ago. We have not, however, the most remote suspicion that so respectable and able a physician as Dr. Renwick, would for a moment lend himself to collusion; but we think he has mistaken the facts.

B. F's paper is too personal. We wish to avoid useless controversy and personal asperity; and though we are forced by justice to be sometimes severe, we are anxious that our animadversions should always be penned with the feeling of doing good, rather than of gratifying the bad taste for "cutting up," which is but too prevalent.

D. R.'s style is too oratorical and full of rhodomontade for science. We want what is clear, plain, and brief. Nothing is easier than rounding off a period of pretty words, which, like Pope's famous "Song by a person of Quality," and Thomas Moore's clever verses entitled, "Nonsense," fill the ear but present nothing but a blank to the mind.

G. M.'s paper is all theoretical. We want facts; for we can ourselves spin theories by the hundred, when we are in the vein, and therefore need not trouble our friends to do this easy task. The discovery of facts, and the patient induction of inferences from them, is a very different matter. This we cannot do at our pleasure, and are thankful for every communication of importance in this line of research.

BOOKS AND PAPERS.

We have received all the German, French, and Italian Journals of the latest dates, and shall endeavour to select what is most useful in them for our next. We have also received a number of new foreign works of interest.

The latest American Medical Journals we have also received. They are making rapid progress towards improvement. In the Philadelphia Journal, edited *gratuitously* by Dr. Chapman, besides many excellent papers, is an interesting report of a Committee of Medical Gentlemen, on the disputed doctrine of venous absorption, who, after repeating all the important experiments, decided against, John Hunter and Mascagni, in favour of Magendie, Flandrin, Tiedemann, Gmelint, &c.

Among other interesting articles in preparation, we may mention: FOREIGN—Frank De Retentionibus, Worms, Amenorrhœa, &c.; French Medical Schools, and the Practice of Broussais; Christen on Opium, and the Romance of the English Opium Eater; Brera and West on Hydrophobia; Hufeland on Pharmacy; Dr. Ainslie's Materia Medica of Hindoston; Falret on Suicide; Rasori on the *pretended* genius of Hippocrates; Cramer on Nux-vomica; Forstmann on Fasting; Marx on the Life of the Veins; Wissmann on Caries; Schmidt on Erysipelas; Mayer on Uterine Polypus, &c. &c.

RETROSPECTIVE: Unpublished MS. Lectures of John Hunter. Alexander Aphrodisæus on Fever. COURT OF APPEALS: Chemistry—Dr. Thompson *v.* Dr. Ure and Mr. Brande, &c. BRITISH—Sir G. Blane's Dissertations; Jenner on Eruptions; Marshall's Ceylon; Barlow's Surgery; Hall's Diagnoses; Park on Fever. &c. &c. ENCYCLOPÆDIA MEDICA and CRITICAL CHARACTERISTICS will consist of upwards of twenty original and interesting articles of much variety.

Works for Review to be transmitted (free of expense) to the Editor, at Mr. Anderson's.

THE

Quarterly Journal.

N° XIV. APRIL, 1822. Vol. IV.

Foreign Review.

Winkler, Beer, Langenbeck, and Stevenson on the Symptoms and Treatment of Amaurosis.*

A celebrated foreign oculist asserted, that it is as hopeless and visionary to seek for a cure in amaurosis as to hunt after the philosopher's stone. The recent researches, indeed, of several distinguished practitioners have done much to elucidate the causes of this afflicting disease; yet we are compelled to acknowledge, that these causes are in most instances beyond the reach of medicine, and that Maitre-Jean's assertion is still but partly refuted, by the able works under review. It is always useful, however, to know what has, as well as what has not been done, that the attention may be the more strongly directed to points which have hitherto been unconquered, and apparently unconquerable. We are convinced, indeed, that were the causes of many diseases which are deemed incurable more accurately traced, much of the uncertainty in treating them would vanish, and more effectual and immediate methods of cure would be dis-

* De Amaurosi. Auctore, B. A. Winkler, 12mo. Berolinum.

Lehre von den Augenkrankheiten, &c. G. J. Beer. 8vo. Wien. V, Y.

Neue Bibliothek für die Chirurgie und Ophthalmologie herausgegeben von C. J. M, Langenbeck. Hannover. V. Y.

On the nature, symptoms, and treatment of the different species of Amaurosis, or Gutta Serena; illustrated by Cases. By John Stevenson, Esq. 8vo. pp. 277. London, 1821.

covered. This result has so far been already effected, by the experiments and the observations of many living ornaments of the profession, and in no department more strikingly than in treating the diseases of the eye. But while cataract, and inflammation, and the numerous affections of the eye-lids, and of the lachrymal duct, have in this manner been successfully studied, we regret that the same success has not attended the study of amaurosis. In this article, therefore, we shall condense all the most useful, as well as the latest, observations of the best authors, in order to lay before our readers a comprehensive miniature of what is at present known on the subject, both in Germany and England.

We should prefer dividing the different kinds of amaurosis into the ORGANIC and the OCCULT, to the less simple arrangement of Professor Beer, who has four classes :—*dynamic*, (which we do not understand,) *organic*, *structural*, and *mixed*. Were it not, that it might lead to errors in practice, we might also, with some propriety, divide the disease into curable and incurable, according to the ascertained state of the structure and functions of the affected eye. The term amaurosis, is confessedly applied to too many and dissimilar affections; and though we dislike minute and useless sub-divisions, yet when these conduce to a clearer understanding of useful facts, and to simpler modes of treatment, it is of the greatest importance to attend to them. It would perhaps be better, as we have two terms in use (amaurosis and gutta serena,) to confine one of them to the organic, and the other to the occult form; but as we are averse to such innovations, we shall not ourselves venture to adopt the distinction. We use the term amaurosis to designate *all affections of the nerves of vision which produce either complete or partial loss of sight*, whether this arise from obvious or inferred organic disease, or from a diminution or loss of sensibility in the eye which cannot be traced to change of structure, or any other evident cause. We begin with,

Organic Amaurosis.

This form of the disease may arise from many different CAUSES, even when there is but little variety in the SYMPTOMS. In the only variety of it described by Beer, there is either total or partial blindness, and behind the pupil, very deep in the eye, we can observe, near the axis of vision, a hollow, coloured opacity, in some cases pale grey, and in others, glittering, yellowish, silvery, or reddish, which becomes brighter and brighter; the iris, paler and paler, and the pupils, less and less moveable, and more dilated, as the disease advances. When the sight is completely

destroyed, we can even observe, behind the pupil, a fine net-work of blood-vessels upon the opacity, consisting of the ramified plexus of the central artery and vein, which the pale colour of the fundus of the eye renders visible. In the dark, we can observe a shining, phosphorescent appearance, similar to that in the eye of the cat, whence Beer has taken its designation. Strong light greatly distresses the patient. It is most commonly found in very old persons, who are withered, meagre, grey-haired, and dwindled; or in children or young people who are consumptive, emaciated, or hectic. It may also occur, at any age, in consequence of wounds and injuries of the eye.

It may be useful to distinguish this from the malignant fungus of the eye, which, in the incipient stage, it somewhat resembles. The first symptom of fungus which we can observe, is an opaque white spot, or a pearly or chalk-like projection, deep in the eye, and covered with the net-work plexus of the central vessels of the retina. Scarpa says it is sometimes like polished iron. In the cat's eye amaurosis there is *no projection*, but, on the contrary, *a concave depression* in the axis of vision. In cases of malignant fungus also the pupil becomes of a deep amber or greenish colour, somewhat like the appearance observed in glaucoma and in some species of cataract, and the distinction should be carefully noted. At its commencement, Mr. Stevenson describes it as appearing in a detached speck at the bottom of the eye, very like the soft medullary substance of the brain, its surface being unequal and studded with ragged projections, which never occur in organic amaurosis. There is also in the earlier stage of fungus, no preceding pain, nor any symptom of inflammatory action, and the sclerotica loses its white colour, and becomes blue or livid.

Mr. Stevenson gives a CASE of the early stage of fungus, which occurred in a child, five years old. Through the perfectly transparent humours of the right eye, three distinct chalk-like tubercles appeared on the concave surface of the retina, covered by a thin opaque membrane, but, so far as could be observed, without any vessels ramifying on its surface. In the left eye, only one tubercle was visible, over which a copious net-work of vessels was spread, giving it a reddish appearance on a white ground. Both pupils were immoveable and dilated; and the iris was forced forward, almost into contact with the inner surface of the cornea. The child was totally blind; but, three months before, could see with the left eye. There had been no preceding pain, nor fulness in the vessels of the cornea. The bowels were constitutionally torpid, but otherwise the health was good. He was brought to Mr. Stevenson, from the coun-

try, to undergo the operation for cataract, for which disease the incipient fungus had been mistaken. It is needless to add, that the fungus afterwards grew to great bulk, deforming the countenance and producing excruciating pain.

It requires some experience also to distinguish incipient cataract from the cat's eye amaurosis, the latter being known by its being situated more deeply, and by the shining, pearly lustre of the opacity.

When we have once ascertained the preceding symptoms of organic amaurosis, we may almost pronounce the disease incurable; for nothing is certainly known of the causes, though it is plausibly supposed to arise from a deficiency in the pigmentum nigrum, and of the tapetum of the uvea. The only method of cure which has been attempted on rational principles, is that of restoring the health by the usual general means; but this has not yet been found successful; and whether it has, in any case, ratarded the progress, or mitigated its symptoms, is very doubtful. We should not, with Beer, be disposed to confine organic amaurosis to this form alone; but should rather extend it to other forms of disease affecting the nerves of vision. It may, for example, arise as a consequence of inflammation of the retina, leaving it thickened, opaque, or varicose, in which case, mercurial remedies may be tried, to promote absorption; and, with the same view, local abstraction of blood, and perhaps a cautious and guarded use of local stimulants, according to the judgment of the practitioner. In rarer cases, the vitreous humour becomes absorbed, and the retina, from want of support, collapses, and destroys the sight. Of this occurrence Mr. Travers gives a case, which he dissected. *(Synopsis*, v. 152, *2d edit.)*

The greater number of cases of organic amaurosis arise from morbid changes in the optic nerves, or in the scull or brain, such as extravasation of lymph or blood, osseous or calculous concretions,—tumours, or other forms of diseased action, and its consequences,—all of which Beer has most illogically placed in his last division. But we must not differ with him about logic, when he has given us such valuable details of the SYMPTOMS. Head-ache, which accompanies most forms of incurable amaurosis, is not invariably present in this, being sometimes altogether wanting, and at others not coming on till vision is lost. The progress of the disease is slow; but it usually terminates in the eye changing its natural structure of health, during the access of which change, objects are seen distorted or displaced. When the disease is seated in the optic nerve, there is no pain, but a slight feeling of obtuse pressure, as if a blunt instrument were pushing the eye-ball out of the

socket. The pupil becomes dilated, immoveable, and irregularly angular on its edge; and, from the first, a black curtain appears to obscure vision, increasing in volume and density, and distorting the objects viewed, till the sight at last is wholly gone.

When the disease originates from organic disease in the brain or the scull, instead of the black curtain there is a kind of hazy, undefined obscurity, which distorts and confuses vision, and this is accompanied with fiery spectra of deformed and frightful aspect, distressing vertigo, and intolerance of light. Instead also of the immoveable and dilated pupil in the former case, we have now an irregularly contracted and exceedingly irritable pupil. Turgescence of the vessels, and strabismus succeeds; and the head-ache, at first distressing, becomes at last so torturing as to make the patient frantic, and produce convulsions;—successive loss of the senses of hearing, smell, and taste;—and finally, mania, paralysis, and death. Before this dreadful termination, the eye-ball often protrudes, indicating a morbid change in the bones of the socket, and in the optic nerve and its sheath.

It would serve little purpose for us to enumerate the varied cases of this description, which dissection has proved to depend upon abscesses, tumours, ossifications, necroses, aneurisms in the brain, the scull, and the blood-vessels connected with the eye; for unhappily all remedies have in such cases been tried in vain. The patient must be relieved, indeed, by every means in our power, from the anguish of the more violent symptoms; but opiates and antiphlogistics will often fail to palliate, and we are reluctantly compelled to leave him to his fate. In the earlier stages of the disease some faint hopes may perhaps be entertained from a steady but cautious perseverance in local depletion, and by medicines which improve the general health, and promote absorption.

Occult Amaurosis.

If Mr. Stevenson be correct in tracing this form of amaurosis to a local inflammation, or superabundance of blood in the deeper-seated parts of the eye, or to congestion or turgidity in the vessels of the retina itself; or even in sometimes tracing the disease to local inanition of the nerves or vessels of the eye, we must be in error to talk of *occult amaurosis*. Mr. Stevenson, we must allow, is partially right; but it is very seldom we can depend altogether on the symptoms which characterize amaurosis arising from these causes and that arising from causes which have hitherto eluded our researches in morbid anatomy,—frequently no trace of disease being discoverable in

dissecting the eyes of those who have had amaurosis. There is still great want of precision in our knowledge of the *numerous species of this form of amaurosis;* for there is no doubt that *several very distinct and dissimilar diseases* are thus denominated; the generic characters of which even the laboured classification of Beer (though it is a great step towards improvement) has not yet sufficiently established.

As a very clear history of that species of amaurosis which arises, in persons of irritable and nervous habits, from hard study, we shall give the celebrated CASE OF MILTON, as drawn up by himself. "For about ten years," (1654) he says, "I perceived my sight failing, and becoming weak, and at the same time I was troubled with the spleen, flatulence, and costiveness. In the morning, when I attempted, according to custom, to read, I felt a deep-seated pain in the eye, and the sight became dim, though it was easily revived by moderate exercise. When I looked at a candle it appeared to be crowned with an iris. Not long after, a dark mist arose towards the left side of the left eye,—which was some years affected before the other,—and darkened the whole field of vision towards that side. When I accidentally shut the right eye, objects seemed much diminished. The right eye also, about three years after, sensibly and gradually becoming deficient for some months before all vision was lost, every object appeared to swim and vacillate; and the whole forehead and temples were affected with a sort of settled vapours, which pressed upon the eyes with a sleepy heaviness, particularly from dinner till evening, reminding me of the Poet in the Argonautics. (*Apolon. Rhod.* ii. 203.) I ought not to omit, that while vision was not yet wholly extinct, when I lay on either side in bed, flashes of light appeared in the eyes when shut. But sight diminished every day; colours became more obscure; and now a network, as if woven of dark, light, and grey, appeared to float around me. Even the perpetual darkness, by night as well as by day, seems to be nearer white than black, and when the eye rolls, it admits a little light, as through a chink."

As it is often of the greatest importance to distinguish incipient cataract from amaurosis, we shall give a few of the characteristics of each which are most to be depended upon in practice. One of the strongest of these, Mr. Stevenson says, is the difference which the flame of a candle exhibits in the two affections. In incipient cataract, it appears as if it were involved in a generally-diffused thin mist, or white cloud, which increases with the distance of the light; but in amaurosis, a halo, or iris, appears to encircle or emanate from the mist, the flame seem-

ing to split when at a distance. While the patient experiences an occasional increase or diminution of his visual faculties, under different states of circulation, as influenced by a full or stimulant meal, which improves or injures vision in different individuals,—probably, as we should think, as the disease arose from inanition or from plethora; and the same may be said of enlivening and depressing states of mind, and other causes influencing the energy of the nervous system, none of which have any effect in altering the sight in incipient cataract. The appearance of a settled mist before the eye, and the sight being aided by glasses in cataract,—none of which circumstances apply to amaurosis,—afford another important distinction. From Beer we may add, that the colour of the opacity in amaurosis is greenish, or reddish, rather than whitish grey, while it appears far behind the pupil, and looks concave rather than convex. Objects also which are viewed by a side-look, cannot be better seen than those viewed in front, as is the case in incipient cataract, in which besides, the pupil is unaffected; and the sight is always diminished in proportion to the observed increase of the opacity. This is never so in amaurosis, in which also vision is best in a strong light.

In a CASE given by Mr. Stevenson, a young gentleman complained of a uniform mist settling before his eyes, which prevented him from reading, by enveloping and obscuring the letters. The sight became gradually worse; and he could see better in a moderate than in a strong light. On inspecting the pupil, an opacity was seen in the situation of the crystalline; the pupil was active; and there was no pain nor apparent local congestion. It was incipient cataract, as its subsequent progress amply proved.

The more CHARACTERISTIC SYMPTOMS of amaurosis, in its different forms, may be conveniently arranged under the state of vision as observed by the patient, with his feelings of pain, &c.—and the state of the eye, as observed by the practitioner.

The patient then, usually observes at first, spectra of flue or insects flying about his eyes, which sometimes take the form of dark, streaked, circular, or luminous bodies. or of a fixed, immoveable spot, and chiefly in a strong light; and in the dark, flashes of fire, and other bright and luminous appearances are seen; while the sight, either suddenly or gradually, is lost, or greatly impaired. He generally shuns bright light; and though he can at times see more distinctly in a weak light than those whose eyes are sound, yet he, for the most part, sees very badly in such a light. It is very common to feel the eyes affected as if they were full of dust or sand,—a feeling which may possibly

arise from diminished secretion in the lachrymal or meibomian glands: the nostrils are also dry. Shooting and dull pains in the head, and pain in the eye, as if it were compressed, are likewise common, and often very distressing.

The practitioner usually observes some change in the pupil of the affected eye, either of dilatation or contraction, the latter, however, being rarer; but there is, *almost uniformly, irregularity in the outline of the pupil, from the irregular contraction of the iris.* The eye is usually clear, dark, and unmeaning; though sometimes, as has already been noticed, there is a coloured haziness deep behind the pupil. *Strabismus* is very frequent, so much so that Richter says, it is *the only certain symptom;* but in incipient and imperfect amaurosis this may be wanting. The accompanying complications with dyspepsia, paralysis, hydrocephalus, concussion of the brain, wounds in the frontal nerve, and from the effects of narcotics and poisons, &c, we have not room to detail with the minuteness which Beer has done; but we shall be more particular in giving the methods of cure.

Treatment of Occult Amaurosis.

The first indication of cure is to avoid the causes which have induced the disease: and these are so varied in different cases, that it is of importance for the practitioner to ascertain them. The more remote CAUSES are supposed to be such occupations, habits, or exertions, as tend to drive the blood to the head, or to weaken the nervous energy. Among the *first* we may reckon stooping, as is usual with literary men, and females employed at their needles; and exposing the eyes to much light, heat, or deleterious fumes. The disease arises from such causes among practical astronomers, microscopic philosophers, and sea officers, from looking through their glasses;—among inspectors of money and new bank-notes;—among those who have been exposed to flashes of lightning in the night, or who take long journeys when the fields are white with snow;—among forgemen, smiths, and glass-blowers; and among those engaged in manufacturing sulphuric acid, bleaching salt, shoe-blacking, and other chemical operations. Among the *second* are reckoned grief, and other depressing passions, and all immoderate evacuations, as hæmorrhage, salivation, too long suckling, nimia Venus, or the imprudent or accidental stopping of any habitual drain. Mr. Travers gives the CASE of a robust country lad, who, becoming the alternate favoured paramour of two females, his fellow-servants, was, from this cause, affected, in a few months, with complete amaurosis.

Mr. Stevenson, concciving that the IMMEDIATE CAUSE of the disease is always pressure, from local inflammation chronic or acute, or from plethora, congestion, &c., lays it down generally, that we must first try to equalize the circulation, and relieve the retina from vascular excitement or oppression, by general or topical depletion, and afterwards by restoring the tone of the vessels and the impaired energy of the nervous texture of the eye. He recommends the abstraction of blood from the jugular vein, and particularly from the temporal artery, to be carried to much greater extent than in simple ophthalmia,—even to syncope itself. Compression of the carotids will also be sometimes advantageous. It is owing to *trifling with partial depletion that so many cases turn out incurable, which a bolder practice in the earlier and acute stage might have arrested and cured.* If these views are correct, nothing can be more preposterous than the local stimulants which are so often empirically applied, and the indiscriminate and thoughtless use of which, Beer also reprobates, as frequently hastening on a slight or a curable attack, to hopeless blindness. This, however, must be according to circumstances; for Ware, Schmucker, and other able practitioners, recommend errhines and electricity, and give cases in which these remedies were efficacious. The errhines which have been used are composed of mercury, sugar, asarabaca, valerian, betony, &c.; and in Ware's cases the mercurial errhines sometimes produced much hæmorrhage from the nose, by their violent operation: this was certainly injudicious, though it was successful. Mr. Stevenson also found errhines useful.

One of the leading differences of Beer's practice from that formerly in fashion, is the rejection of EMETICS in every case where there is the slightest symptom of determination to the head, and where there is not a very obvious overloaded state of the stomach. He is also hostile to the use of diaphoretics, except when it is ascertained that the disordered functions of the skin have caused the disease,—such as when the skin is dry, with wandering superficial pain, as if from obstructed perspiration.

Whether the amaurosis arises from a syphilitic taint or not, the exhibition of MERCURY is found to be one of the most powerful remedies, if not carried to the point of salivation, for then there is danger that it may prove injurious. It is prohibited by Beer in scrophulous habits, and particularly when there is any appearance of the vitreous humour dissolving.

When the disease is evidently produced by INANITION, it has been the practice to resort empirically to all sorts of medicines which are supposed to invigorate or stimulate the nervous system, such as valerian, musk, assafœtida, carbonate of ammonia,

opium, hyocyamus. Some of these Beer has found advantageous; but he speaks with hesitation of general tonics, and recommends caution in the use of the preparations of steel, and bitters, particularly when these are combined with narcotics; and, in direct opposition to our English practice, he prefers to these and the mineral acids—the whole tribe of antispasmodics, camphor, aconite, millepedes, arnica, hellebore, &c.

Pungent vapours, and other local excitants, are much used by some continental practitioners. These are seldom employed in this country, except by empirics. Mr. Travers speaks decidedly against their use. Wardrop is equally hostile to them. Beer, on the other hand, though he does not employ them so much as Schmucker and Richter recommend, yet he occasionally has recourse to them, taking care not to allow any of the fluid naptha or liquor ammoniæ to touch the eye; and, lest too much irritation be produced, to withdraw the hand as soon as the eye becomes painful or the tears begin to run. If these cautions be not attended to, a slight affection may be converted into an incurable amaurosis.

On the principle of counter-irritation, blisters have been applied to the temples, forehead, and nape of the neck, and all seem to be agreed in the utility of the practice. Sinapisms, antimonial ointment, and other cuticular stimulants, have also been recommended; but Beer does not seem to put much faith in these: Travers is almost certain of their inefficacy, and thinks it a relic of superstitious faith in the miracles of royal touch, &c. Beer is positive that they ought not to be used when there is local determination of blood, or symptoms of varicose veins, or when there is any organic lesion or morbid change of structure in the eye. In other cases he thinks that these local stimuli may be beneficial, and merit a trial.*

There is one remedy, somewhat novel, founded upon Mr. Stevenson's pathology, which we have not found mentioned by any of the continental writers,—we mean *dry cupping the eye.* This is performed by carefully fixing a well-adapted, strong glass, fitted with an exhausting syringe, upon the edges of the orbit, adapting the instrument to the effect intended to be produced. When the air is exhausted, there is excited a great redness and tumefaction of the eye-lid; an immediate tur-

* For an account of Beer's mode of treating rheumatic amaurosis, and a practical and useful review of his whole work on the Eye, we refer to our first vol. p. 286, which paper was drawn up by an able surgeon and oculist, who studied under him at Vienna.

gescence of the vessels of the conjunctiva; and an effort, or tendency to protrude in the whole globe of the eye,—all which, of course, must empty, and relieve the deeper-seated vessels from any existing superabundance of blood. The gentleman who "named" [mentioned] the remedy to Mr. Stevenson had seen it successful in a CASE of complete amaurosis. Mr. Stevenson gives another CASE, in which he himself tried it with immediate partial relief, but does not say whether he carried it any further; but from its producing the power of contraction in an immoveable and dilated pupil, and restoring partial vision after it had been extinct for twelve months, it must be an instrument of considerable efficacy, and well merits a trial. We shall have no hesitation in trying it on the first favourable case that occurs, and should hope more from it, provided the retina, and other indispensable parts, are not already disorganized or irreparably injured, than from the whole catalogue of antispasmodics, and evacuants, and tonics.

Cases of Amaurosis.

As nothing is more instructive, in characterising and treating so multiform a disease as amaurosis, than a clear history of cases, we shall give a few from Mr. Stevenson, who practises with considerable energy, and, at the same time, with judicious caution. These, indeed, should never be separated.

The Marquis ——— had the blood-vessels of one eye excessively turgid, without pain or apparent inflammation, and his Lordship not finding it convenient to follow the treatment at first prescribed, in consequence of a journey to the continent, was ordered, on his arrival in Paris, to take a STRONG EMETIC. This was successful. The relaxed and distended vessels almost immediately regained their healthy tone and natural calibre.

A banker, in London, who had symptoms precisely similar, and who, from hearing of the success of the preceding case, requested to be similarly treated, was cured in the same rapid manner by an EMETIC, which seemed, indeed, in both cases, to operate like a charm.—M. Ribe recommends seven successive emetics! (*Act. Suec.* 1.)

Mrs. D., aged fifty-three, had a violent inflammation of the left eye, induced by exposure to cold when the body was much heated. The pain in the ball of the eye was lancinating, and very severe, darting to the temples and forehead, and depriving her of rest. The pupil was muddy, the iris a little contracted and fixed, and vision so much impaired that she could only distinguish night from day. Spectral flashes of light and ignited

bodies gave her great distress. The tongue was white, the bowels constipated, and the pulse quick and wiry. The circumference of the cornea exhibited a zoned aggregation of blood-vessels, clearly indicating INFLAMMATION of the choroid membrane, and probably of the RETINA.—*By depletion, as far as the vigour of her constitution would bear, and by mercury, and the local application of narcotics, to relax the contracted pupil,* she was completely cured in three weeks.

Mr. Stevenson was told, by a person of credit and intelligence, that he knew a poor man, who had been blind for many years, suddenly and unexpectedly restored to sight by his eyes being exposed for some minutes to the vivid light of the mid-day sun. *This exposure to the Sun is actually recommended for amaurosis, on the continent.*

J. Reynolds, aged forty, of low stature, dark complexion, and of remarkably temperate and industrious habits, discovered, one morning in the spring of 1816, that his left eye was dim, and this, for some days, gradually increased. He was ordered spare and cooling diet; to keep his head cool and his feet warm; to bathe the eye, night and morning, with warm water and vinegar; to abstain from reading, or any minute exercise of the right eye; and to have several leeches applied to the temples. A mercurial laxative was likewise prescribed at night, followed by a brisk purgative in the morning, with a repetition of the leeches, if necessary. The eye improved, and he was cupped on the temple, and had a blister behind the left ear. There was also dropped into the eye, three times a day, the following collyrium:—

℞. Vin. Opii.
Aq. Rosæ.
Mucil. Acaciæ, g. ā ā ʒij.
Submur. Hydrarg. ϑj. Misce, ft. Guttæ;

and in a fortnight the complaint was wholly removed. The succeeding spring the affection returned, and was removed by the same treatment, except that he was more frequently cupped; and it took three weeks to complete the cure. In 1818 he escaped the attack, in consequence, as he supposes, of having lost blood from the arm for another complaint for which he was treated by Sir H. Halford. In 1819 the attack came on as early as February, but was not so great, though it took longer to remove than formerly. Cupping and purging were again successful. In 1820 he lost blood, of his own accord, as a preventive, and he had no attack till September, when it was necessary to cup him more than once on the tem-

ples and back of the neck. He also had a saline mixture, and the volatile vapour applied to the eye till it produced a pricking sensation, and an errhine, which caused a copious discharge from the eyes and nose, with perceptible and immediate relief. But, in spite of this active practice, it took a month to complete the cure. Mr. Stevenson thinks that this disease arose from a sudden repulsion of blood from the superficial to the deep-seated vessels, by a partial application of cold to the eye, which was the first cause of the disease. There was no vertigo nor head-ache, and though the pupil was fixed and dilated in the strongest light, there was no opacity. He thinks also, that if external local stimulants, and internal tonics had been used, as is the common practice, that the patient would, in all probability, have been rendered incurably blind.

A lady of rank, aged thirty-nine, and of nervous temperament, on rising at the usual hour, found that she had entirely lost the sight of the left eye, without having had any indications of such an attack. The pupil was found to be dilated, and did not contract in the strongest light. There was a feeling of weight, stiffness, rigidity, and tension in the eye-ball; but no visible turgescence in the conjunctiva, nor opacity in the humours. *The disease had been caused,* AS IT OFTEN IS, *by exposing the side of the head, when much heated, to a current of cold air from a window.* Mr. Stevenson gave her great hopes of a speedy cure, and he fulfilled his prediction by resorting to leeches, aperients, the errhine, and the volatile vapour, as in the preceding case. General tonics, with local stimulants, would have aggravated the vascular congestion, and fixed the amaurosis.

Ann Hemming, of nervous and debilitated temperament, subject to low spirits, and lately to grief, from the loss of a child, perceived her sight affected with weakness after working much by candle-light, in making fine dresses. She lost sight of distant objects, and near ones were obscured by appearing to be covered with a black gauze. She next perceived showers of "blacks" in countless multitudes, floating before her eyes, yet she could look at the sun, when at the brightest, without uneasiness. She was subject to occasional sickness, shiverings, night-mare, starting from sleep, and great pain of the head, as if it were corded, or fixed in a vice. She was ordered some opening pills, her head and fore-head to be washed with cold water night and morning, and two ounces of blood to be cupped from each temple. This produced fainting, palpitation, throbbing, and noise in the ears, and the least sound gave her pain; she had also so great languor and weakness for several days, as to be unable to sit up. *The cupping,* however, *immediately relieved the head and eyes,* and her sight became clear; though it is singular

that strong light was now very painful. She was restored to spirits by mild tonics and nourishing diet. By again applying to fine needle-work, she had a relapse about two months after she was cured; cupping again immediately relieved her, and she continued well till last March, when she again had an attack of the dimness, which was also instantly relieved by cupping, but the loss of blood, as at first, induced fainting and subsequent weakness. She was directed to abstain from needle-work in candle-light, and to keep her bowels open by a small tea spoonful of sulph. magnes. in chamomile tea, with twenty drops of sulph. acid every day. Mr. Stevenson considers this case as strongly illustrative of his views of amaurosis, on the principle of *an irregular and partial distribution of blood being very apt to take place in weakly constitutions.*

A young lady, aged fourteen, in good health, and of a sanguineous temperament, after exposure to rain, was seized with head ache, cold chills, and other symptoms of fever, to which succeeded weight and oppression in the fore-head and failure of her sight, from the interposition of a thick black gauze between objects and the eyes. Stooping, or violent exercise, made her giddy. Pupils fixed and dilated, and throbbing of the temples; bowels constipated, and much depression of strength and spirits. She was cured in ten days by leeching the temples; opening the bowels with antimony, calomel, and rhubarb; by bathing the feet in water with mustard and salt in it; by stimulating snuff; by a blister between the shoulders; and by keeping as much as possible in the upright position, both by day and night.

A London merchant, aged about thirty-six, above the middle stature, and of a nervous and delicate habit, by hard riding in hot weather, and indulging freely at table, brought on violent headache, giddiness, and sickness, which an apothecary, mistaking for incipient symptoms of typhus, ordered him bark, wine, and stimulant food. He soon became convulsed and delirious, under this ignorant treatment.; and when by a more rational method, the violence of the symptoms were got under, he remained pitiably hypochondriacal, lethargic in the day time, restless in the night, while his memory, his hearing and sight, became all greatly impaired, and his legs were so weak that he could not stand. The pupils were dilated, nearly fixed, and he could not direct the eye-balls. *Moderate depletion* was steadily followed up with an opening powder of three grains of calomel, ten of rhubarb, and one of capsicum. Three leeches brought away highly carbonated black blood, and the powder, copious and highly offensive fæces. This relieved him, and he had a pill every night and morning of a grain of capsicum, and a grain of calomel made with opiate

confection; with a draught (camphor and ammonia) twice a day, and a pinch of mercurial snuff at bed time. His feet were also immersed in very warm water, with mustard and salt in it, and his head was shaved, and often bathed with water, spirits, and vinegar. A blister was afterwards put behind each ear. By persevering in this treatment, he was completely cured, and able in six weeks to resume his business.

Beclard's Additions to Bichat's General Anatomy.*

The admirable work of Bichat is now, we presume, in the hands of every one who makes any pretension to a philosophical study of his profession. The strongest proof of its great merit is, that it has passed almost untouched through the severest of all ordeals,—the test of time. It is true, that the ardent genius of Bichat sometimes led him for a moment from the path of observation and induction; but these lapses appear insignificant when compared with the general correctness of his views, the magnitude of the subjects to which he devoted himself, and the great contributions which he made to our stock of knowledge.

The additions of M. Beclard, whose accurate research and extensive knowledge we cannot too highly praise, are almost as many and as varied as the subjects of the original work. This, in fact, renders them little susceptible of analysis in the compass of a single paper; and as it would be tedious to detail unimportant and uninteresting inquiries, we shall confine our notice to such as have novelty or excellence to recommend them; and these—owing to the genius and industry now in so vigorous operation among professional men—are more numerous than many might suppose, in a study which has been so long cultivated as anatomy.

With regard to the ULTIMATE STRUCTURE of the various parts of the animal frame, M. Beclard leans to the opinion of those who consider that all parts are formed by the modification or mixture of three different tissues,—the cellular, the muscular, and the nervous,—a division which dates from the time of Haller,

* Additions a l'Anatomie Générale de Xav. Bichat, par P. A. Beclard, Professeur d'Anatomie et de Physiologie à la Faculté de Médécine de Paris. 1821.

but which has been most fully developed by Bichat. M. Beclard rejects the fibrous tissue which M. Chaussier had proposed, as he thinks it only a condensed modification of the cellular.

The CELLULAR TISSUE is distinguished—by its appearing in the form of thin, whitish laminæ, or very fine thread-like fibres which will bear to be considerably stretched;—by its consisting almost entirely of gelatinous matter;—and by its want of sensibility, though it is said to be insensibly contractile.—We apprehend, that this last property is more talked about than understood. We still want experiments, to furnish us with clear notions of the vital powers of this tissue. Insensible contractility, indeed, seems to wear the aspect of contradiction.

The NERVOUS TISSUE is marked—by a sheath, or membranous coating of cellular structure, enveloping a pulpy, and what, perhaps, may not be improperly called, a deliquescing substance;—by its consisting of a fatty or oily matter, combined with albumen;—and by its possessing sensibility.—The vital properties of this tissue are also but ill understood. Cabanis *(Rapports)* thinks it is only the extremities of the nerves which have sensibility, and that all the other parts of them are insensible. Even experiments on the nerves often give doubtful results. In the experiment of Mr. Charles Bell, given in our last Number, (p. 143.) the section of the portio dura in an ass, seemed to give the animal *no pain*, and it began immediately to eat. In Magendie's "Journal de Physiologie Experimentale," which we have just received, we find, that on repeating Mr. Bell's experiment on the ass, *pain was produced.* "L'animal," says M. Magendie, "au moment de la section, temoigna, par ses efforts et par ses cris, qu'il y était *fort sensible.*" He adds. that he has often, in his experiments, found, as Mr. Bell had done in this one, that *some particular nerve* might be pricked, twisted, or cut, without giving pain; but that it would be wrong from such a circumstance to conclude *all the nerves* to be insensible. (T. ii. p. 67.) Mr. Wallace, of Dublin, has, we perceive, also made some modifications of Mr. Bell's doctrine, from varying his experiments.*

The MUSCULAR TISSUE is known—by its soft, cylindrical, reddish or greyish fibres;—by its consisting wholly of fibrine;—and by its being irritable.—The distinctions between contractility, sensibility, and irritability, put us somewhat in mind of the ingenuity of Hudibras, who

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* After this was sent to press, we were favoured, by Mr. Wallace, with an abstract of his able paper, which we shall introduce in the Encyclopædia Medica.

Could distinguish and divide
A hair 'twixt West and South-west side;
On each of which he could dispute,—
Confute,—change sides,—and still confute.

According to Meckel, whose industry is praise-worthy, but whose fancy sometimes outruns facts,* the solids and fluids are all composed of two elementary fluids; the one formed by globules, the other by a coagulated matter, which alone, or united with the first, constitutes, when in a liquid state, the fluids; and, when concreted, the solid structures. The globules assume certain differences, according to the parts to which they belong. Those of the kidneys, for example, appear smaller than those of the spleen; those of the liver, smaller still. They are not present in certain fluids and solids, for instance, the urine, the cellular and fibrous tissues, the cartilages, and the bones. On the other hand, they abound in the nerves, muscles, and blood, and, as we stated above, (p. 27,) from the experiments of Prevost and Dumas, are of different forms in the blood of different animals. It is singular, that in the earlier period of conception no globules are to be seen in the substance of the embryo. The globules and the fluid may take the form of laminæ, or fibres. The laminated form belongs almost exclusively to the fluid matter. Fibres may be formed by this substance alone, as in the bones and tendons; but they more frequently result from its union with the globules, as in the muscular and nervous systems.

According to Beclard, MORBID ANATOMY admits of two principal divisions,—changes of structure, and changes of form. The first may be again subdivided into changes of organization, and into degenerations, or productions of accidental structures, which exist only in a state of disease. The derangements of exterior forms have too little resemblance to allow of any methodical division, and, for this reason, an anatomical arrangement appears most useful.

We agree with M. Breschet, (*Dict. de Médecine*, ART. *Ana-*

* Meckel's researches in this department are chiefly microscopical; but though we think highly of the microscope, we ought to remember, that it is exceedingly apt to delude us with unreal appearances. Spallanzani, when experimenting on animalculæ, set a peasant to look through his glass; but the rustic declared he could see nothing where the philosopher saw myriads of infusoria. In such cases, fancy often does more than observation.—When Meckel talks of a *concrete fluid*, he becomes to us quite unintelligible. There is, indeed, much of fancy in his whole doctrine.

tomie Pathologique,) that Morbid Anatomy is still in its cradle, as the most of the facts are still incomplete, and have been observed only in few relations. M. Breschet justly traces our slow progress in this department to the *rage for discovering what is marvellous or extraordinary, while the common every-day appearances are negligently passed over.* Nothing can be more injurious to useful science than this; for it is the explanation and grounds of common phenomena which can so frequently be turned to account in practice, while uncommon cases may astonish by their singularity, but must be much less instructive. It is by simplifying the explanation of common things that great genius is displayed; for while the merest tyro can put on a look of wonder, and may give a tolerable history of an uncommon case,—it requires the highest talent to explain the phenomena of simple inflammation, or of simple fevers, such as occur every day. It was reserved for the genius of Newton to explain the fall of a stone, though the fact had been observed from the creation. Harvey in like manner explained the circulation of the blood, which, from its commonness, had been overlooked.

The labours of M. Chevreul have shewn that FAT, instead of being an elementary principle of animals, is composed of two peculiar substances, which he has named stearine and etaine. Besides the sebacic acid obtained by distillation, two others (the oleic and margaric) may be procured by treating fat with an alkali or metallic oxyde. The soaps produced by the action of alkalies on oil are nothing but the salts resulting from the combination of the base with these acids. It is composed, as to structure, of clews, *(pelotons)*, irregularly oval, and varying in size, each of these being composed again of spherical bodies, contained in minute vesicles, strung together like pearls, by a fine filamentous tissue. Dr. Hunter tells us farther, that when the fat is abstracted, the vesicles collapse and disappear. These are distinguished from the cellular tissue by being impervious to fluids, and by not allowing the fat to escape, even when liquified by heat, so long as the vesicle is not ruptured. The vesicles, besides, are only in contact, and not in continuous union; and they are found only in particular parts, such as the orbits, the cheeks, the kidneys, &c.; though, in corpulent persons, they abound under the skin, particularly in the neck, belly, and folds of the peritoneum;—all which shew its difference from the cellular tissue of other parts.

Bordeu, who was a man of fact, and not of fancy, was the first who compared the CELLULAR TISSUE to a sort of slime, or glue, an idea since illustrated by Wolff, Blumenbach, Platner, and

Meckel. The last supposes it to be his fluid element in a concrete form. In support of their opinion, they say that inspection shews it to be homogeneous, and that the appearance of fibres, or laminæ, is owing to the means of investigation employed; that it presents no openings on its surface, as it should do were it areolar; that it presents fibres, laminæ, or cells, according to the mode employed to shew one or other structure; and that, in the human fœtus, and in the inferior animals, it presents a uniform mucous appearance. There is no doubt, according to M. Beclard, that it is the seat of evident vital actions; it is certain, that under many circumstances it appears composed of cells, and that there is no inconvenience in supposing this to be the case.—This is singular language. If it is certain, why is supposition either necessary or convenient?—The truth is, that the notion of this tissue being always cellular arose from the too hasty generalizations of Haller, De Bergen, and Bordeu; though every body who has dissected a muscle from its attachments, and who understands what is meant by a *cell*, must be aware of the impropriety of the term; for all that can be seen of the tissue, in its dippings among the fibres of muscles,—its sheathings of vessels and nerves,—and its linings of the serous and mucous membranes, is a sort of filamentous or thread-like net-work, of slender texture, destitute of all appearance of plates, cells, or honey-combs; and sometimes, as in the sheaths of the arteries and veins, and under the skin, and the mucous and serous membranes, it is quite continuous and membranous. The term cellular ought therefore to be supplanted by some other less objectionable, derived from its general property of sheathing, enveloping, or lining the parts where it is found.

According to Mascagni, who has analysed this tissue with great minuteness, the vesicular portions of which it is composed are generally nourished by appropriate blood-vessels, ramifying among the sulci, whence the fatty matter is derived, and poured into small cellular vessels. When aqueous matter is also secreted, as in dropsy, it cannot, of course, unite with the fat, but remains in an uncombined state, separating the particles of fat, which are seen distributed through it.

The chief MORBID APPEARANCES in this tissue are those formidable diseases, scirrhus, malignant fungus, carcinoma, white swelling and other deranged actions about the joints, elephantiasis, parasitical animals, dropsy, corpulency, and adipose tumours. Of this last there is a singular case, by Sir A. Cooper, in the last volume of the Med. Chir. Trans.

Carus, Tiedemann, and Serres have taken much pains in

tracing the developement of the NERVOUS CENTRES in the fœtus. The brain at first scarcely exists. In the embryo of six weeks we find a flattened cord, representing the medulla spinalis, and swelled at its upper extremity. At two months, the substance which is to fill the future cranium, is composed of the cerebellum, of considerable extent, in a transverse direction; of the brain, which is very small; of a portion between these two, larger than the brain, and corresponding to the tuber annulare, or rather to the corpora trigemina. At a later period the brain increases; in the fifth month it covers a part of this developement; at the sixth it reaches to the cerebellum, beyond which it passes about the seventh. The other parts, particularly the tuber, do not increase in the same proportion. The whole mass is at first divided by a longitudinal fissure. The two halves afterwards unite, except at certain points, where spaces, forming cavities, exist. At the third month, instead of a longitudinal fissure, we find the third ventricle and the aqueductus Sylvii of a large size, and communicating with the middle ventricle and the fourth ventricle. In the end, the aqueduct contracts into a narrow canal, at the seventh month. In the earlier period of pregnancy the basis of the brain only exists, and this is very imperfect. The hemispheres are developed in a membranous form; rising from the basis, this membrane turns backwards and inwards, and covers the corpora striata and optic thalami; and the space underneath the membrane forms the lateral ventricle. The anterior lobes are first seen about the the third month; the corpus callosum is formed about the same time, by the junction of the membranous hemispheres. With the corpus callosum, appear the cornua Ammonis, the fornix, the corpora mamillaria, the posterior commissure, and the crura cerebri; soon afterwards, the hippocampus minor, the pineal gland and its pedunculi, the anterior commissure, the septum lucidum and its cavity communicating with the third ventricle, and, lastly, the tœnia semicircularis, the choroid plexus, and infundibulum. In the first months, the surface of the brain is smooth; the convolutions are formed from the seventh to the eighth month.

The SPINAL MARROW is at first a kind of divided or double riband, extending from the cerebellum to the coccyx. At the third month its edges are turned back, and adhere to each other, forming a canal continuous with the fourth ventricle. At the fourth month, according to M. Serres, it is shortened, and gradually ascends to the level of the second lumbar vertebra. At the fifth, the canal still communicates with the fourth ventricle. Every part of the nervous system is at first fluid and homoge-

neous. The fibrous structure is manifest at an early period: according to M. Serres, the decussation of the pyramids is visible at the eighth week. Tiedemann has seen fibres in the pyramids at the fourth month, and soon after in the corpora olivaria: they were traceable to the optic thalami and corpora striatæ, where they expanded, to form the membrane of the hemispheres. At the sixth month the fibres are almost exposed on the sides of the lateral ventricles. At that time the cerebrum, examined by the microscope, appeared composed of globules, immediately under the pia mater, and of fibres more interiorly. The grey substance does not appear until long after the white. In the latter stages of pregnancy the canal of the spinal marrow is filled by grey matter; it is also developed on the convolutions, the cerebellum, &c.; but its colour is not very distinct until the ninth month. M. Serres adopts the opinion of Tiedemann, that this white substance appears first in the spinal marrow; but he thinks that in the optic thalami and corpora striata the grey matter is deposited before the white makes its appearance.—We do not see much importance in all this detail of facts and of suppositions; but,—*minima ad maxima*,—we know not to what it may lead.

M. Meckel thinks that the NERVES of the heart and intestines are not formed until after the nervous centres. The sympathetic, however, exists at an early period, and is formed as soon as the brain and spinal marrow, if not sooner, as Ackermann thinks. At one month from conception, the intercostal nerves and vertebral ganglia are visible; though neither the brain nor spinal marrow is distinct at that period. The sympathetic exists in cases of acephalous fœtus. At three months the olfactory and optic nerves are visible: the fifth pair appears in the next month. At the seventh, the origin of all the nerves may be seen. According to Tiedemann, the spinal and cerebral nerves are very distinct at their origins long before the grey matter is visible.

The GANGLIA are composed of two different substances; the one formed by the fibres, which pass in and out, and which frequently anastomose. When the ganglion is formed on a single nerve, the fibres run in a parallel direction: when several nerves unite to form a ganglion, they cross in every direction, and form numerous connections between the nerves. The other substance is soft, pulpy, of a reddish or yellowish grey, and lodged in the cells of a very delicate cellular tissue. It is easily separated from the fibres running through it, except in the ganglia of the sympathetic. The experiments of Wutzer have shewn that there are essential differences between the peculiar matter

of the ganglia and the grey substance of the cerebrum, formerly supposed identical.

Meckel, Zinn, and Scarpa, suppose the FUNCTIONS OF THE GANGLIA to be purely mechanical; such as facilitating the distribution of the nerves; effecting an intimate mixture of them; favouring their union, separation, &c. Johnstone, and the greater number of modern physiologists, suppose these functions to be essentially vital, and think they are intended to moderate or destroy the mutual influence of the brain and nerves. But there are some difficulties; such as the transmission of certain impressions, in spite of the ganglia; the existence of the vertebral ganglia without the same effects as those attributed to the ganglia of organic life.—This subject is of great interest, and would, we have no doubt, well repay the inquiries of talent and genius.

It is difficult to determine to what part of the nervous system the GANGLIA IN THE LOWER ANIMALS correspond. Worms and insects have isolated tubercles, united by nervous cords, which separate from them in a radiated manner. In the molluscæ the whole system consists of two nerves, twisted round the œsophagus, and an annular swelling embracing it. Blumenbach, Cuvier, Gall, and Meckel, think that these parts correspond to the spinal marrow of the vertebrated animals. Reil and others think that they represent the sympathetic. Walter compares the nervous cords of the molluscæ to the nerves of the eighth pair, and those of worms and insects, to the spinal marrow. Weber compares them to the ganglia of the vertebral nerves. In animals with vertebræ, the system of the ganglia is more extended in proportion as the species ranks higher in the scale of existence. The eighth pair decreases in the same proportion. This system is always proportioned to the spinal marrow, when both are compared with the whole body, and not with the brain only. It always bears a certain relation to the alimentary canal and vascular system.

As to the GENERAL APPEARANCE of nervous substance, M. Beclard shews that the medullary portion of the brain is in some parts distinctly, and in others obscurely, of a fibrous texture. The fibres can in no instance be traced into any of the convolutions of the brain, though their existence may be inferred, from the mass being more easily torn in one direction than in another. The fibres are distinctly seen in the corpus callosum, c. striatum, &c. and in the tuber annulare.

The TERMINATION OF ARTERIES is in very minute divisions, the form of which varies so much in different parts, as Prochaska and Soemmering have shewn, that we can, by this test alone

discover, by the microscope, from what part any minute injection has been taken. The middle coat of arteries contains a certain proportion of fibrine. This is contrary to the opinion of Berzelius, (*Animal Chemistry*, 25,) who could not detect fibrine in it by the usual tests. It is rather tantalizing, in this opposition of opinions, that Beclard forgets to detail the analysis by which his fibrine was obtained. M. Beclard disbelieves in its muscular nature, but thinks that, from its great elasticity, it should be included in the system of the yellow fibrous, or elastic parts. He thinks also, that this elastic, contractile power is inversely, as the diameter of the vessel, or increases as the vessels diminish their calibre; in branching out, for instance, into capillaries, in their progress from the heart to the more distant parts of the body. This idea is, to say the least, a very strange one, and the foundation very questionable, when we consider the action of a ligature on this coat, and other facts of the same nature.

M. Beclard hesitates in admitting the existence of the IRRITABILITY OF ARTERIES, although he is obliged to confess that it is necessary to the explanation of certain facts. This point is no longer doubtful, when we consider the experiments of Thomson, Parry, W. Philip, and Hastings; although unimportant disputes about the name to be given to this property have caused an appearance of differences of opinion which do not in reality exist. All may be explained if we describe irritability as a power of contraction, not exclusively connected with the muscular, or any other structure. It may be called vital force, organic contractility, or tonicity, according to the taste of those who mention it.—We observe it is asserted without qualification, that neither mechanical nor chemical stimulus will irritate an artery, which may be punctured by a needle or a scalpel without shewing any sign of motion. The Edinburgh Journalist, who states this, proved it repeatedly, he says, by exposing the artery in a limb, the moment after amputation, and applying the instrument directly to the tissue. We are still unconvinced by this barbarous experiment. We envy not the feelings of the person who could thus wantonly torture a patient during a moment of (to him) terrible suffering, merely to satisfy a controversial curiosity. The same writer maintains, that the contraction produced by chemical agents, arises wholly from the coagulating of a portion of the substance, and the consequent crisping of the tissue. This may be; but what are we to make of his explanation of the retraction of a divided artery, which, he says, depends "on the mechanical or chemical nature of the tissue,—on the elasticity and contractility in consequence of the absence

of the distending force, and must not be regarded as any thing analagous or similar to irritability." This property, indeed, ceases with life: but that is nothing to the hardy Journalist, as it can be accounted for, he says, by the state of the organization. He seems, we think, to have been in the fair way of disproving all animal motion; for, by the same novel logic, it would be easy to set aside the circulation of the blood, muscular action, and all the movements of the body, voluntary and involuntary. Such absurdities must always follow when a reasoner argues for his system rather than from facts. In doubtful cases, like this, it is much the more preferable way at once to confess than to expose ignorance, by absurd and wire-drawn argument.

The FLOW OF BLOOD in an artery is continuous and not interrupted, or remittent, as would be the case, at least in the large vessels, were the heart the sole agent of circulation. This M. Beclard ascribes to the constant tendency of the arteries to diminish their area, in consequence of their contractility. If we suppose that the ventricle is not emptied of blood at each contraction, there can be little doubt that the current of blood passing from the veins into the auricles must contribute to produce this effect. To ascertain this point satisfactorily, is still a physiological desideratum. It has been argued, indeed, that the blood could not be circulated without the muscularity of the arteries, particularly those which are most remote from the heart. Of course, if this be the case, the muscular power in the vessels ought to increase proportionally to the distance from the heart. This, however, is contrary to observation; for, instead of increasing in vigour, they actually diminish, the arterial tissue becoming so attenuated as to be traced with some difficulty. Yet this is only an argumentum ad magnitudinem and not ad potentiam, and the arteries may here have a contractile power which we cannot either demonstrate or explain. In a word, we are still ignorant of the precise facts, and till we know these, our reasonings can be nothing but fancy and conjecture.

As to MORBID CHANGES in the arteries M. Cruveilhier has found the inner and fibrous coats destroyed by ulceration without the occurrence of aneurism.

The disease of the arteries from CONTRACTION, the reverse of aneurism, and usually connected with disease of the heart, is difficult to account for, since the greater number of cases manifest no change of arterial structure, though occasionally the coats of the vessels are thickened. Sometimes, indeed, we can trace the cause of the contraction to the pressure of aneurisms and other tumours,—but this is rare. The affection is mostly observed in the aorta, the carotids, and other large vessels.

M. Boclard briefly alludes to the regeneration of arteries, observed by Dr. Parry, an interesting fact, but now well known. When an artery, by means of a ligature or otherwise, becomes inflamed, effusion, often very copious, takes place on its surface, causing a thickening of its membrane, and sometimes adhesion of its parietes. It is more frequent on the inner than on the outer coats of the artery, particularly when the inflammation first originates in the tissue of the vessel, and is not transferred to it from a neighbouring part. In the latter case the vessel loses its tenacity, and is easily broken; in the former, the albuminous effusion usually obliterates its canal; in arterial ossifications, osseous or calcareous matter is deposited on the inner coat. It is important to remark, that a red state of the arterial membranes has been observed, (in certain fevers for example,) which does not appear to result from inflammation.

The VEINS, in some cases, are in a DILATED state to a very great extent, an affection which is not confined to their calibre, but produces elongations of their body, as appears from their remarkable windings and irregular course. This, during life, can only be observed in the more superficial veins, but dissection and injections have shown, as might indeed have been anticipated, that it is by no means confined to these. In the case of hæmorrhoids, concretions are sometimes found in the dilatations. As in the arterial system, so in the venous, morbid contractions and inflammation is occasionally observed, and originates probably in similar causes, but most of these are unknown. We have seen the veins of a stump after amputation, highly inflamed as high as the groin; and we have also seen such inflammations arise from venæsection.

The CAPILLARY SYSTEM, as it is called, has still to be farther investigated before we can pretend to know much of its structure and phenomena. The injections of Ruysch, indeed, made us acquainted with finer vessels than could before his time be traced; but we require still finer injections than have yet been accomplished before we can talk positively of the exhalant and excreting vessels of Haller; the lateral pores of Mascagni; or the termination of arteries carrying colourless blood, and continuous with veins of Bleuland. Beclard is inclined to think Mascagni at least was wrong; and we are inclined to think both Haller and Bleuland wrong. Analogy, however, is often a bad foundation for reasoning; and we must wait for more distinct facts and experiments before we can explain *how the blood gets from the arteries into the veins*. That it does so pass there can be no doubt; but we cannot tell whether this is by a distinct system of capillary tubes, as Bichat thought, differing in office

and structure from both veins and arteries, and intermediate to these;—we cannot tell whether the blood is effused or extravasated from the arteries, and then taken up by what are learnedly called the radiculæ of the veins;—we cannot tell whether the arteries actually terminate in veins, though, if they do, the red blood does not, so far as we can trace it, flow into the minute ends of the vessels. These capillary terminations of vessels are certainly different in structure from the large ones; and it is but fair to conclude, that their office and action are also different. The minutest injections of Ruysch, indeed, and the nicest microscopic observations of Meckel and Prochaska, are here all at fault. Yet though we know so little of the vessels termed capillary, many a goodly theory of fever and of inflammation has been built upon them. These we leave to the admiration of their authors.

Respecting the ERECTILE TISSUE, the investigations of modern anatomists, Cuvier, Mascagni, Tiedemann, and others, have shewn that the spleen, corpora cavernosa, &c. are not composed of cells, but are formed by the anastomoses of their vessels, particularly the veins. J. Hunter and Duverney had already expressed the same opinion. A structure somewhat similar exists in certain other parts, as the lips, tops of the fingers, &c. The injection of an aneurism by anastomosis succeeds best when made from the veins. *(See our paper on Venous Absorption, infra.)*

Meyer, Magendie, and Ribes believe in the existence of VENOUS ABSORPTION. The principal experiment in its favour, in which a limb being connected to the body by an artery and vein only, a poisonous substance is introduced into it, and produces its usual effects,—is rendered doubtful by the consideration that the blood returning to the heart may receive the contamination. The experiments of Tiedemann and Gmelin, in which substances taken into the stomach were recognizable in the vena porta, are explicable by the communication of the lymphatics with the neighbouring veins.—Mascagni decidedly rejects the doctrine, and thinks that absorbent glands are composed wholly by the convolutions of the lymphatics. As this subject is of some interest, we shall take it up afterwards, in a separate paper.

The SENSIBILITY of the MARROW of bones, asserted by Duverney, really exists, as may be seen in animals, when a little time is allowed to elapse between the pain of the operation necessary to expose it, and the experiment which it is wished to make. If an articular cartilage be exposed in an animal, from white it gradually becomes red, probably from the increased vas-

cularity of the synovial membrane. When it is cut into, an exudation is soon observed on the cut surfaces. When broken cartilages are not partly ossified, they never adhere. Their apparent union is formed by a bony band, formed round the broken ends. No nerves can be traced into it, and no blood-vessels carrying red blood. It is to be remarked, however, that it becomes yellow in jaundice, and red, when an animal is fed with madder. M. Beclard gives the various conflicting opinions respecting its structure. Bichat thought that cellular tissue formed the basis of it. Mascagni talked of plates radiating from the centre to the circumference; Hunter, of fibres implanted perpendicular to the bones; Du Hamel, of concentric plates; and Herrisant of spiral plates, mutually convolving.

As to the FIBROUS SYSTEM, M. Beclard thinks the yellow elastic ligaments should form a separate branch from the rest of this division—or what M. Chaussier calls the white or albugineous fibres. The yellow ligament is found wherever a permanent resistance, allowing occasional yielding, is required, as between the spinous processes of the vertebræ; in the posterior cervical ligament; and in the elastic layer expanded over the abdomen of quadrupeds. It differs, of course, from the common fibrous tissue, which possesses only passive resistance; and from the muscular, which continues only while the fibre contracts. A ligament of the same kind keeps the claws of animals of the cat kind constantly extended and hidden, until the animal protrudes them, by the action of the flexors; and it is by a similar tissue that bivalve shells are opened and shut. In man, M. Beclard refers to this system the proper membrane of arteries and veins, of lymphatics, of excretory ducts, of the respiratory passages, the fibrous covering of the corpus cavernosum, of the ureters, and perhaps the spleen. The tissue is discovered by its yellowish colour and great elasticity, but it has less tenacity than the white. He seems to forget, in his haste to generalize, that many of the parts to which he refers have highly marked vital actions, which the mechanically-acting yellow ligament, even when best characterized, never possesses.

The WHITE FIBROUS TISSUE is found most extensively in the periosteum which envelopes the bones, the dura mater, the fibrous capsules (not the synovial surfaces) of the joints, and the terminations of ligaments, aponeuroses, and tendons; besides the membranes of the kidneys, the cartilages of the larynx, and the albuginea of the eye. The fasciæ of the tendons abound most at the terminations of the long muscles, as in the wrist and the ancle; and by their insertion into the bones, they bind down the muscle and even alter its direction. The same remark

applies, with some modification, to the muscular fasciæ of the rectus, the triceps, and of the thigh, as well as in the external oblique of Poupart's ligament. It is formed by numerous white, tough, strong, slightly elastic fibres, united by cellular tissue either in a parallel or irregular manner. Heat, alcohol, and acids, make it shrivel, by coagulating its albumen. No nerves or absorbents have been traced into it, and no vessel carrying red blood. The Edinburgh journalist gives the very singular account of it—"That it is *almost the only one* which forms the tribe of compound membranes;" though he immediately adds, that "there is scarcely such a thing as a simple membrane to be found in the animal structure."—So much for consistency.

M. Beclard, though he adheres generally to Bichat, thinks that Meckel is right in rejecting his distinction of the cartilages of the ears, nose, trachea, and eyelids, compared with common cartilage. The supposition of their fibrous structure arose from their envelope, which has this appearance. FIBROUS CARTILAGE, however, is found on the surface of the inferior maxillary bones, the clavicle, the knee-joint, the lower end of the ulna, the glenoid cavity, on the surface of the substance between the vertebræ, the bones of the pubes, the sacrum, and ilium, the annular ligament of the radius, &c.

The MUSCULAR FIBRE, according to Meckel, is evenly, and of the same size throughout; presenting the appearance of globules or opacities, separated by transparent portions. The transverse section of a muscle has very much the appearance of a basaltic column, the fibres being close together, in the form of prisms rather than of cylinders. All this, however, though to Meckel, and Sir Everard Home, and Sprengel, it may appear profound and satisfactory, is little so to us, who see it disproved in every muscle which we examine without the delusive aid of microscopes or imagination; for, instead of being uniform in magnitude, these fibres are different, not only in every muscle, but in the same muscle, at different ages and different states of health. It is an inquiry of a piece with that concerning the ultimate particles of matter, which we leave to Dr. Wollaston.

When the nerves of a muscle are divided, its contractility is soon exhausted by stimuli. When they are undivided, it is diminished in the same way, but is restored by rest. These facts seem to prove that it is not inherent in the muscle, but derived from the nervous system. According to Meckel, the nervous influence is essential to the contraction, but only in a similar way to arterial blood, both being indispensable to the life of the muscle, which is, notwithstanding, endowed with irritability of its own.

In respect to the VOLUNTARY MUSCLES and the influence of the nervous system upon them, three questions present themselves.—1. Does the brain influence their voluntary contractility? Here we have two different sets of phenomena to take into account. On the one hand, the general independence of the involuntary muscles on the nervous system; and, on the other, the occasional influence exerted over them by this same system; for instance, the effects of the passions, and the occasional modification or suspension of the action of certain involuntary organs. Bayle, who possessed the singular faculty of suspending the action of his heart, did it with the same facility that he set in motion a voluntary muscle. The heart has so few nervous fibres going to it, and these so small, that some anatomists of name have gone near to deny their existence; yet does the heart retain after death its irritable and contractile properties much longer than the deltoid or pectoral muscles, which are amply furnished with large nerves. This we cannot explain; and we are equally ignorant of the cause of those cases of local paralysis in which the nerves, on dissection, appear healthy and unaffected. 2. Is the spinal marrow neccessary to produce this influence? On this point the experiments of Dr. Wilson Philip and Mr. Clift have refuted those of Le Gallois, by which he endeavoured to shew that the heart derived its principle of motion from the spinal marrow; and what are we to conclude from these facts, but that the motion of involuntary muscles, though ordinarily independent of the brain and spinal marrow, is occasionally influenced by them. 3. Are the nerves passive, and wholly influenced by the muscles? Here M. Beclard thinks, that the permanence of the contractility of the voluntary muscles, after the destruction of the brain and spinal marrow, is no proof of their total independence on the nervous system, as the nerves still exist, and may act independently of the nervous system.

As to the DILATATION of the voluntary MUSCLES, or their relaxation, M. Beclard states, that in the lengthening of the tongue and of the proboscis of the elephant, and in the creeping of the leech and serpent, there are two sets of fibres, the one circular, or radiated, the other longitudinal. When the longitudinal fibres contract, therefore, the circular, or radiated ones extend, and the general effect is to diminish the length. This is ingenious, but we know not whether it is the *whole* truth.

Respecting the MUCOUS SYSTEM, and its developement, M. Wolff, who has traced the progress of the intestines in the chick, says, that, at first, the canal is short, straight, open in front, and continuous with the membrane of the yolk, without any evident

distinction between them; at a later period, their division is marked by a contraction, which gradually extends farther; so that at birth the two parts are connected by a narrow pedicle, which disappears when the yolk is wholly absorbed. In man, the vesicula umbilicalis, in the early part of gestation, performs the same offices as the membrane of the yolk does in birds; several facts seem to prove that it performs the same offices with regard to the intestines, though it is difficult to ascertain this point, as this first period is very short in mammaliæ, and the fœtus soon acquires a mode of existence differing from that of birds. The vesicula umbilicalis, however, is larger in proportion to the fœtus, and closer to the umbilicus, according as the parts are examined at an earlier period; the intestine is, for a long time, partly contained in the basis of the umbilical cord, and sometimes sends off a prolongation to the umbilicus; at other times, a small canal may be seen, passing from the vesicula along the cord, for a certain distance, towards the umbilicus; different anatomists have seen the vesicula communicating with the intestines in the fœtus of quadrupeds; and Meckel says, that he has observed a similar communication in the human subject. Oken, Meckel, and others, conclude from this, that in man, as in birds, reptiles, and fishes, the mucous membrane of the intestines, by its union with the vesicula, forms, at an early period, a part of the ovum. The same is the case with the membrane of the urinary and genital organs, which is intimately connected with the allantoid; the skin, on the other hand, being continuous with the amnios. Hence it follows, that the developement of these parts is very early, if they be not even the first formed; that the embryo is at first indistinguishable from the ovum; and that the two integuments, the skin without, and the mucous membranes within, instead of being, as in the adult, a double bag, continuous and inflated at the extremities, are two semi-canals, the front part of the circumference of which is deficient. Cuvier and Meckel describe the villosities observed on the surface of mucous membranes, as amorphous, inorganic, and gelatinous, consisting of opaque globules; and not, as was supposed by Hewson, as formed by the interweaving of the capillary vessels. Nerves cannot be traced into it; but numerous lymphatics arise from it; whence, partly, its remarkable property of imbibing fluids. It is important with regard to mucous membranes, that they will not form adhesions, unless the cuticle be abraded, and the mucous secretion dried up. In the whole account of mucous membranes, it is implied that they are the same in structure and functions; though dissection and observation prove that there is no mucous on the healthy

membranes of the eyes, mouth, and throat, while the structure also is in these parts different from the stomach, the intestines, and the bladder. *This should make us cautious in drawing general conclusions respecting the identity of diseases in what are called mucous membranes; for what is true of the membrane of the uterus, may not hold in that of the lungs or of the intestines.*

M. Beclard shortly alludes to the resemblance which the membrane lining abscesses, fistulæ, &c. bears to those of the mucous canals. This membrane, which Mr. Hunter was the first to consider in a proper point of view, is comparatively a novelty to M. Beclard's countrymen. M.M. Bayle and Laennec have written on the subject; and the name,—for every thing must now have a name,—of *accidental mucous membrane* has been given to it.

That the SYNOVIAL MEMBRANES are closed sacs is proved by several facts. Inflammation of such membranes, when it is found beginning on the loose part of the bag, extending towards the cartilage, and gradually covering its surface, may be observed in animals when an articulation is exposed to the air; the redness being always confined to the surface of the cartilage, and never extending deeper. In this experiment, particular vessels may be seen extending themselves from the loose part of the membrane, over the surface of that which covers the cartilage. If a bone be divided perpendicularly, leaving the cartilage untouched, and if this part be then broken, by separating the two halves of the bone, the fragments of cartilage will be seen connected by the synovial membrane.

On the interesting subjects of the GLANDULAR SYSTEM, and the influence of the nerves on SECRETION, M. Beclard alludes to some of the experiments of Mr. Brodie, which are in direct contradiction to the opinions of Bichat. He mentions no new facts on the subject; and what is rather extraordinary, does not quote the experiments of Dr. W. Philip, which seem to be now placed beyond the possibility of a doubt.

The MUCOUS TISSUE, incorrectly called *rete mucosum*, which Bichat supposed to be a vascular structure divided into two distinct parts, appears to contain many parts, according to the observations of M.M. Gaultier and Dutrochet on the skin of the negro and of quadrupeds. M. Gaultier divides the mucous tissue into four parts; but M. Dutrochet, with whom M. Beclard coincides, reckons only four: the dermis, or true skin; the papillæ; the membrane of the papillæ; a coloured layer; and the epidermis. M. Beclard thinks that there is no cutaneous absorption by simple contact, without friction. Moisture is no less necessary than friction, according to our observations.

The existence of PORES IN THE CUTICLE is far from being proved. Fontana speaks of serpentine vessels seen in it by the microscope; but M. Humboldt, who has made experiments with a microscope magnifying 35,200 times, asserts that these are folds and not vessels; he could not discover folds in the cuticle when magnified 312,400 times.—In what manner then is the matter of perspiration transmitted through it?

M.M. Bayle and Laennec attribute the developement of ACCIDENTAL STRUCTURES to a particular and unknown disposition of the animal œconomy, and consider the causes commonly assigned only as occasional circumstances favouring the action of this disposition. In other words, they confess their entire ignorance of the causes. M. Broussais, on the contrary, considers these productions as constantly resulting from inflammation, and the combination of albumen in different forms, with the structure of the body, according to their nature, and the degree of excitement. Meckel considers the changes as depending on an aberration of the nutritive processes, and the effusion of an albuminous fluid. M. Beclard divides accidental structures into four :—tubercles, scirrhus, cancer, and melanose.

Such are a few of the interesting details furnished in this able continuation of the Anatomie Générale. We should have been much more particular in our analysis, had we not foreseen that all who possess the original work, and who are interested in the progress of the science, will add these Additions of M. Beclard to their libraries. We have, however, given so much of what is most important in the book, that those who cannot procure it, may at least have, in our abstract, the better parts of it; and, in our future articles, we promise not to lose sight of the useful illustrations, which we shall always be proud to borrow from M. Beclard.

DECANDOLLE, LINK, AND SPRENGEL, ON THE PHILOSOPHY OF PLANTS, AND THE UTILITY OF BOTANY.*

IT is a great mistake, though it is a very prevalent one, that it is useless for professional purposes to study any part of Botany,

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* Théorie Elémentaire de la Botanique. Par A. P. Decandolle, à Geneve, 2d edit.

but what is strictly medical. By going upon the principle on which this mistake is founded, we could demonstrate, that even the knowledge of medicinal plants is almost useless to the physician, to the surgeon, and even to the apothecary; for it is but seldom that plants are fresh collected by them, or under their inspection, and seldom that they are seen by them till dried, or otherwise prepared for the market; and since this is so, of what use to them can a knowledge of the Linnæan descriptions and distinctions ever become, though they be treasured up with care in the earlier years of study? Of what use to the profession in this country, is the most accurate Botanical knowledge of convolvolus jalapa, callicocca ipecacuanha, or smilax sarsaparilla, when those plants are never seen here? The minute descriptions of the species and varieties of cinchona by Aylmer Bourke Lambert, may, no doubt, be very useful to the transatlantic collectors of bark; but they will prove to be a fallacious guide to the purchaser of bark when collected. The practically useful knowledge of this sort can only be learned in the warehouse and in the shop. It must be learned, however, though botany can never teach it; for the best botanists would here find themselves altogether at fault and out of their sphere. In this view, therefore, the study of medical botany itself appears to be of small value; and everybody will allow that the mode of prescribing, and the various doses of medicines prepared from herbs, which are introduced in works on Medical Botany, are wholly out of place, rarely consulted, and never trusted to. These subjects, indeed, have nothing to do with Medical Botany, and are only introduced to conceal the meagreness of the stricter botanical parts, by spicing them with scraps from herbals and pharmacopeias.

The botanical study of MEDICINAL PLANTS may, however, be sometimes useful to the country practitioner, who may find it the most eligible way to collect his own digitalis, hyoscyamus, and conium, fresh from the field; and still more so to those whose engagements lead them to remote parts, where medicines cannot be otherwise procured; and where they may be necessitated to discover the medicinal properties of plants wholly new

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Grundlehren der Anatomie und Physiologie der Pflanzen. Von H. F. Link, Berlin.

Von der Natur und dem Bau der Gewachse;—*und*,

Anleitung zur kenntniss der Gewachse. Von Kurt Sprengel, Halle.

Elements of the Philosophy of Plants. By A. P. Decandolle, and K. Sprengel. Translated from the German, 8vo. pp. 520. 8 plates. Edinburgh, 1821.

to them. In such cases it ought to be carefully noted, that the poisonous property of unknown plants, cannot well be known by their effects on the inferior animals. The goat eats greedily of the noxious water hemlock, (*cicuta virosa*); and the partridge of North America feeds with impunity on the poisonous seeds of the Kalmia.

In these points of view, the study of botany is certainly useful. But its chief value to a medical man is, as we conceive, its indirect INFLUENCE on his HABITS of observation and minute distinction. Botany cannot be studied at all, even in its rudiments, without the most accurate scrutiny of minute, and often almost imperceptible differences; it cannot be studied at all, without an exact knowledge of the logic of method and distinction. Now this minute observation of differences, and the power of grouping them, are qualifications indispensably essential to the practitioner in distinguishing the symptoms of diseases, and in grouping them into classes. It may be said, indeed, that this is rendered unnecessary by following an accurate system of Nosology; but all who have carried such a system to the patients' bedside must have soon perceived its imperfections, and must feel strongly that no nosological system, however well arranged, can ever supplant the ready habit of discrimination which we are sure the study of botany is better calculated to establish, than any other scientific pursuit. Besides, it can be pursued in the earlier years of study, when more complicated knowledge cannot be understood, and the important habits which we have mentioned can then best be indelibly stamped upon the mind.

Those, however, who reject this view of the utility of botany, and are inclined to look upon the study of the Linnæan system in particular as a mere waste of time, in parroting a long catalogue of barbarous terms, and names which are daily changed and changing by the spirit of innovation, cannot refuse to allow the utility of studying the PHILOSOPHY OF PLANTS, in their mode of germination and growth, and in all the circumstances connected with their life, in health and disease. This bears so closely upon the study of the animal system, and may in so many points lead to useful inferences and important discoveries, that it ought to form a proportionate part of medical study, though we are sorry to be forced to say, that, so far as we know, it is at present but partially pursued. We have not a doubt that this neglect has originated in the barren and lifeless details introduced into the science by Linnæus; for in former times, when botany was not a mere index of words, when Dioscorides, with all his errors and his fables, was the oracle of the schools, it formed a very prominent part of medical education,—as we

undertake to prophecy it will form again, since the defects of the Swedish school have become glaringly apparent; and since the study is now beginning to be pursued, as it ought, experimentally and philosophically. Now that the researches of Grew, Malpighi, Lewenhoeck, Saussure, Du Hamel, and Hales, which were in a fair way of becoming eclipsed by the locust-like clouds of names from Upsal, are again coming into importance, and, are followed up by so many distinguished living philosophers, we hope that the study will be stripped of its repulsive barrenness, and will, by its utility, attract the general attention of the profession. This we shall endeavour, as far as we can, to promote, and shall, in the short space which we can here afford, give a small specimen of such details as appear interesting from the able works before us.

As we cannot afford room for systematic regularity, we shall begin with the DISEASES OF PLANTS, because it is a subject which is seldom brought into prominent notice in the elementary works. These diseases are chiefly produced by external, or hereditary causes, and among the first, the greater number arise as amongst animals, from superabundant food or other luxuries. The most commonly observed instance of such diseases, is that of flowers becoming double, as in the rose, daisy, columbine, ranunculus, and many others, in which the too abundant supply of nourishment converts the calyx, nectaries, and stamens into petals, frequently preventing altogether, the formation of seed. Muller observed the curious fact, that the nectaries in such cases sometimes supply the place of the organs of fructification, *(Verhandlungen der Gesellschaft, &c. I.* 214.) The double-blossomed cherry often gives out from the centre of its flower a leaf in miniature, and the whole spike in the common way—bread, *(Plantago major)*, is often converted into a leafy pyramid. Frequently also, a flower will send off others from its disc or centre as in the proliferous pink, and the daisy, called by gardeners the hen and chickens. We have seen an instance of this in Dactylis glomerata, though in wild plants it is rare to meet with such diseases of luxuriance. We have once or twice seen it in the daisy, ladies-smock *(cardamine pratensis,)* and marsh-marigold *(caltha palustris.)* Of this last plant we gathered, several years ago, at Catrine, Ayrshire, a specimen, having one of the petals growing on the flower-stalk, about an inch below the blossom. It seems often to arise from a similar cause, that flowers are either converted wholly or partially into leaves, as we have seen in one instance of a wild Leucojum æstivum; and as has been observed by Bernhardt, in Colchicum Autumnale, *(Romer. Archiv. II.)* and Hesperis matronalis. It is luxurious

nourishment also which causes leaves to subdivide, or to curl at the edges, as in solanum tuberosum, scolopendrium officinale, and fraxinus excelsior. *(Sprengel,* 413.) Fruits sometimes give out leaves, such as the pear.

The cause of the white, silvery, or golden spots and streaks seen on leaves, and sometimes admired, as in holy, ivy, agave, and mint, is not well known. That these are not natural, appears from the fact, that the variegation cannot be propagated by seed, and that the discoloured portion of the leaf does not exercise the same function as the green portion in regard to the oxygen of the atmosphere, as was experimentally proved by Sennebier. *(Physiol. Veget. IV.* 273.)

In the case of insects and parasitic fungi, and other plants producing disease, it is worthy of remark, that *a diseased tendency in the plant seems to favour the production, or at least the increase of these enemies.* This we believe holds equally true in the case of hydatids, and worms in the human system. On this principle bushes which grow upon an unfruitful soil, are more apt to be covered with lichens than those in gardens and shrubberies. The same is the case with the leprosy, or scab which Giovene informs us destroys the olive trees in Italy. *(Opuscoli Scelti, XIII.* 106.)

One of the most common and most destructive of these parasitic diseases is BLIGHT, which, like many other subjects, has been actually explained into obscurity; for supposing that it could only be one disease, and have only one cause, circumstances distinctly opposite have been confounded and identified, in the same manner as we have above remarked with respect to amaurosis. Sir Joseph Banks, in his paper on blight, refers the rust blight to a minute fungus, the seeds of which, as *they float in the air*, enter the pores of the epidermis of the leaf, particularly when it is sickly, or they are taken in from the soil by the pores of the root. With all deference, however, to the respected author of this theory, we must say that to us it appears fanciful and gratuitous. The existence of the fungus, indeed, is proved, but how its seeds came to the plant it attacks, we are wholly ignorant. One thing we know, it is very infectious, and if care be not taken, spreads rapidly. Sprengel is inclined, and we think plausibly, to attribute the disease to a morbid state of the juices of the plant, caused by some unknown circumstance in the seed, the air, or the soil. The cure of this sort of blight, indeed, by steeping the seeds in solutions of arsenic, and other steeps, shews clearly that it is not random seeds, flying about in the air which cause it; and the same is true of smut, which converts the grain into a black powder. The too dry or too

moist state of the air, or its rapid changes of temperature, often cause other sorts of blight and mildew.

Almost every plant which grows is infested with some species of INSECT, which lives by its destruction. We need not mention the extensive ravages of locusts, who eat up every thing green, as these are known to every school-boy; but it is not perhaps so well known that the little insect Bostrychus typographus, which feeds on the inner bark of the fir and pine, often destroys whole forests. About thirty or forty years ago nearly two millions of trees upon the Hartz alone fell a sacrifice to it. (*Trebra, in Schriften der Berlin, &c. IV.* 4.) The minute tribe of aphides, or plant-lice, are often also extensively destructive, and as their production is favoured by want of a free circulation in the air, they are numerously generated in hot-houses and gardens. The honey-dew observable on some plants is thought by Wildenow, Curtis, and others, to be the excrement of aphides; but though this may sometimes be the case as on the hawthorn (*mespilus oxycantha,*) yet on the oak, the beech, and the orange, (*De la Hire, Phys. des Arbres, I.* 150,) the honey-dew is clearly an exudation of juice from the leaf, and the numerous insects found there are evidently attracted by the honey.—Sprengel (321) very strangely says, that this is the only rational explanation of blight and mildew; though how he came to confound these diseases with honey-dew is to us inexplicable. The ravages of caterpillars and larvæ may also be mentioned among the enemies of vegetation. The Cercopis spùmaria sucks the juices of grass, willows, and other plants, throwing it out again in the form of foam, which is known by the name of cuckoo spit.

When the absorption is much greater than the transpiration, there is produced a disease which resembles DROPSY in animals, and sometimes JAUNDICE, as the leaves become pale and yellow, and fruit is seldom produced. Frost may cause this, by acting on the superficial exhalants. It has sometimes been cured by soot, lime, animal dung, or by transplanting into rich dry soil. We must take some other opportunity of speaking of abortion, canker, consumption, rot, and death, as affecting plants,—and go on to their distribution, according to soil, climate, and exposure.

Both plants and animals are very much under the influence of AIR and CLIMATE. It is a singular fact, that the more imperfect the organization of plants is, the more universally they are distributed, in the same way as the animalculæ of infusions may be produced everywhere. It is also to be remarked, that in these, the identity of the genera and species is much less easily ascertained than in the more perfect plants. Almost two-thirds,

for example, of the lichens of New Holland are, according to Brown, the same as the European species, though nothing can be more dissimilar than the larger plants of the two countries; and a great number of mosses, jungermaniæ, confervæ, fuci, and grasses, are in similar circumstances,—as Humboldt's researches in South America have also proved. In his recent memoir, Humboldt calculates that there are almost 55,000 *plants* known; while the number of known *insects* is only 44,000; of *fishes*, 2,500; of *reptiles*, 700; of *birds*, 4,000; and of *quadrupeds*, 500. The families of plants, which he calls *social* often extend over vast tracts of country, such as the pine forests, and the heaths in the North; and the cacti and bambusæ of tropical America. M. Sprengel remarks, that the same distance from the equator produces rather an agreement in the orders and genera than in the species. Those of the tropical climates are nearly the same round the globe, while there is a marked difference in the temperate and frigid zones of the north and south. The Andes, which reach nearly from the tropics to the Straits of Magellan, have great influence, as mountain tracts always have, in determining the vegetation. Upon such principles, when once accurately known, the botanist may be able to assist the antiquary in tracing the sites of ancient and obliterated towns and cottages, by the exotics remaining long after the desolation of the ruins where they grow; and even the early migrations of the human race may be faintly followed by the plants which they have left in their wanderings. *(Haworth, Saxifrag. Enumer. Pref.)* We confess that we are not so sanguine in these hopes as Mr. Haworth; though we doubt not the inquiry may produce many curious facts.

As to the SOIL which different plants prefer, it is to be remarked, that similar plants are, in the same climate, found in similar soils, though these are completely separated, and even distant from each other. On salt soils, for example, we find the several sorts of chenopodium, atriplex, salsola, and salicornia. Upon this principle Botanical maps have been constructed, marking the different soils, marshes, lakes, and streams. De Candolle was the first who published a map of this sort, in his *Flore Françoise;* Wahlenberg has given a very correct one of Lapland; and Maclure, of the mountains in the United States. —*(Neue Geographische Ephemer.)* One of the most striking facts connected with this subject, is the effect of cultivation. We have more than once seen, in the barren heaths of the North, where a small spot of ground had been turned up, or even stripped of its turf, that it would next year be covered with thlaspi, rumex acetosa, sinapis arvensis, and other plants, which

might not be found for many miles. When the turf is allowed to form again, all these disappear. In the course of cropping also, when farmers lay down their land in grass, the whole tribe of annuals, which had previously so annoyed them, entirely disappear; yet the instant the grass land is ploughed, they spring up again in their former numbers. These are very curious facts, and we do not observe that they are noticed, much less accounted for, in any of the books.

We are altogether ignorant of the facts respecting the FIRST DISTRIBUTION of plants over the globe. In the remains of grasses, reeds, palms, ferns, and other plants found in rocks and strata, there is no appearance of seed, though we cannot say they never had any, as it may have been destroyed. If plants were originally only produced on mountains, and distributed by migration, the laws of vegetation must, in the first ages, have been different from what they are now; for many thousand species now known could not exist in mountainous regions. Besides, many plants are of confined locality, and though furnished with winged seeds, as *carduus cyanoides*, migrate very slowly. Streams which might carry seeds to their banks below, are seldom found to do so to any extent. The assistance of birds in distributing seed, is considered by M. Sprengel not to be proved, except in the case of the misletoe.

In considering the PHYSIOLOGY of plants, M. Sprengel has, in some instances, indulged similar fancies to those which we condemned in a former paper, respecting the ultimate structure of animals, according to Muys, Prochaska, and Meckel. He tells us, quite gravely, that every organizing fluid, in passing from the fluid to the solid state, shews small spheres or vesicles, and spiculæ, or minute needle-shaped bodies. The spheres he refers to hydrogen separated from the water, because it is but slightly soluble in it. The needles again, as originating from oxygen, are more slowly disengaged. This detail is proved by the phenomena of electricity,—the negative sparks and images being spherical, while the positive are spicular. The same order of spheres and spiculæ are seen both in the generative sap and in the slimy fluid of plants. Their cellular texture, indeed, is wholly formed from the spheres; and the tubular, from the spiculæ. He afterwards tells us, however, of stretched cells, similar to tubes, and answering the same purpose, in the mosses and jungermaniæ, which seems to accord ill with his hypothesis. We confess that we are too dull, and too partial to intelligible and useful facts, to be able to see the use or aim of such visions. His account of the *green colour of leaves* is similarly referred to the play of oxygen and hydrogen in exhaling and neutralizing

each other. What are we, after this, to think of the English translator's judgment, who says, "that in no one part is it possible to discover a trace of that visionary mode of considering facts, which has unjustly been represented as belonging to all German writers?" Sprengel, however, we admit, is much more free of this than most of his countrymen. He is not very tractable in adopting the wild speculations of others, and he occasionally displays a hardihood of independence which is not common in a science where the authority of names reigns with so much tyranny. We shall give an example of his botanical scepticism.

The foundation, he thinks, of the system of Jussieu in the distinction of plants into acotyledonous, monocotyledonous, dicotyledonous, and polycotyledonous, appears, if we examine nature accurately, to be ill chosen, if not erroneous; and he goes on to prove his position by showing that mosses, lichens, ferns, fungi, and many water plants which are said by Jussieu to be without cotyledons,—possess these most distinctly, and in some instances *(callitriche and myriophyllum)* two cotyledons are seen. In the plants said by Jussieu to have one cotyledon, Sprengel denies its existence, and Jussieu's disciples in defending him are reduced to the shift of talking of a *cotyledonous extremity*, like some of the old schoolmen, who described *spirit* to be not breath, but *as if breath.* To say the least of this French system, it appears to be exceedingly far-fetched, and though it pretends to be a natural arrangement, we cannot see that it is much more so than that of Linnæus, which is said to be artificial. The sexual system no doubt dissevers many plants which have a close resemblance in form, though differing in their organs; but so does the cotyledonous system, which besides, is subject to the inconvenience of having a multitude of plants, whose place in the arrangement cannot be ascertained; not to speak of the frequent difficulty of examining the fruit and its incipient germination.

As a very strong example of the dissevering of plants of similar form, we may mention *colchicum* and *crocus*, which so exactly resemble each other in blossom as to be distinguished with some difficulty. We allow the great difference of their medical properties, but that is a circumstance which botanists seldom think of. *Viscum* and *chloranthus*, *ranunculus* and *alisma*, are other striking instances, and we could muster many more of the same sort. One will have it that *parnassia* belongs to the violets; another, refusing to accede to this, classes it with *reseda*, and after having done so proceeds to argue from this, that the flowers of *reseda* are not compound but simple, and

because its root tastes like horse-raddish, and its stem is angular, and covered with a thin transparent cuticle, it must accordingly rank with horse-raddish, and of course *parnassia* also must stand beside these. Such trifling is, in our humble opinion, quite unworthy of the name of science.

The more scientific botanists of our day are beginning to see this, and both Decandollé and Brown, have partly adopted the opinion of Adanson *(Familles des plantes, I.)* that a continued and uninterrupted arrangement of genera and species is quite artificial, and accords not with nature. The doctrine that a continuous series does accord with nature, is founded chiefly on the unproved and vague supposition, (Linnæus, *Amœnitat. Academ.)* that at their first creation, plants of various genera and species were intermingled and produced mules, which formed connecting links with the parent plants. But even supposing this to have been the fact, it is almost certain that mules could not be produced between every two of the primitive plants; and of course those which did not intermarry, if we may say so, must still stand alone without relatives or affinities. Mr. Haworth *(Saxifragearum Enumeratio, Pref.)* has well remarked, that botanical arrangements should resemble a map; for as well might a geographer endeavour to link kingdoms and countries in a line, as a botanist to make a continuous line of genera and species; for the kingdoms and countries in the one case, like the genera and species in the other, mutually approximate, not merely in one point, but almost invariably in many; thus *spatularia stellaris* would be a *Robertsonia* but for its discordant filaments, a *miscopetalum*, but for its reflected calyx, or a *saxifraga*, but for both these characters.

We are surprised after this to hear Mr. Haworth saying, that it is not a botanist who makes genera, but nature. This we would at once grant, if a natural arrangement could ever be formed; but this appears to us to be altogether impossible. Jussieu places his mosses, sea-weeds, and mushrooms first; Linnæus, last; and somebody else may think they stand better in the middle; yet will each contend most strenuously and preposterously that he is following nature.

Mr. Haworth, also, forgetting his own philosophical principles of mapping the science, goes on to distribute the genus *Mesembryanthemum* into sixty-nine sections, which is all very well; but not contented with this, and hankering after the continuous arrangement, which in his preface he so strongly argues against, he is sorry to say, that the characteristics of some genera, which he fancies the 69 sections contain, lie veiled in difficulties which defy research, and which have hitherto foiled

all his perseverance to reconcile their discrepancies. Yet strange to say, he does not completely despair of success, for he has again taken them into cultivation, in order to make a new attempt to do what he himself has told us is impossible!

One great purpose such striving after impossibilities has served, like many other theoretical speculations, it has led to the investigation and description of circumstances in form, structure, and organization, which had been and might still have been overlooked,—though we ought not to forget that it may lead to the neglect of other circumstances no less important, but which are unconnected with the system.

This AFFINITY, as it is called, of genera and species, is the leading principle of our present botanists. If they can but establish, by minute comparison of circumstances, that so many plants resemble one another, as that they can class them as an order or as a genus, they think they have reached the summit of the science. It is an equal object of their ambition, if they can, by the same minute comparisons, shew that either Linnæus, Jussieu, Decandolle, Ventenat, Salisbury, or Brown, has placed a plant or a group of plants in a wrong order or genus. This is the highest aim of botanical criticism. Now the whole of this pursuit appears to us, so far as it is not considered an amusement, or an exercise of minute observation, to be quite chimerical and without any foundation in nature; for the affinities so much hunted after, are, in one instance out of two, altogether in the botanists fancy and not in the plants. It is, indeed, just a part of the same dream which pictures a graduated chain of transition in nature, from the most imperfect plant, up to man and to angels. That no such transition really exists, everybody who chooses to look around him may at once perceive, if the prejudice on which it is founded be discarded.

We have a very striking proof of these visionary principles of grouping and of transition, in the acknowledged origin of the Linnæan system. The celebrated Swedish botanist expressly stated, that he divided his Philosophia Botanica into twelve parts, because there were twelve months in the year; and into 365 paragraphs, because this is the number of days in the year; in the same manner, *he divided plants into five groups, because we have five fingers on each hand, and five toes on each foot!!!* Not quite pleased, however, with this analogy, he intended to have increased the groups to seven, *because the world was created in seven days!* The names of the seven groups he intended should have been, 1. Legions; 2. Tribes; 3. Classes; 4. Orders; 5. Genera; 6. Species; and 7, Varieties; but this change in his system he did not live to make. We are really

astonished at such puerilities, but not so much so at Linnæus for contriving them,—for such are incident to all system-makers,—as at critics who gravely defend them, and insist upon our adopting them, even now, as genuine discoveries in science.

One of M. De Candolle's great discoveries is, that blossoms which were hitherto considered as formed of ONE PETAL, such as in the cowslip, hyacinth, and narcissus, are really formed of several petals, united so closely as to appear one. The great importance of this profound discovery is to facilitate the grouping of plants, as those which were formerly separated, on the supposition of their being polypetalous, are now brought into a proper neighbourhood, such as *Kalmia* and *clethra; rhodora* and the *azaleas*, called *cleodora*. Similar to this discovery is another of the same stamp, equally profound, by M. Correa de Serra, that sometimes a style or stigma, apparently simple, is really formed of two closely connected. It would be worthy of the ingenuity of these minute, hair-splitting botanists to reverse this fancy, and try to prove that the division of petals and of styles is a mere deception, since they are all united, or *as if united*, at their insertions or outgoings. These two latter terms, however, must be very cautiously used, for it seems the branches of a tree are not really a continuation of the main stem, but arise from inserted buds; while the various parts of a flower are not inserted, but are pushed out from those underneath.

The TERMS used in describing plants are now become so infinitely multiplied, as to look most forbiddingly repulsive to beginners. We have to thank M. Sprengel for discarding from his work a great number of such as were useless to all who have a competent knowledge of Latin. M.Richard, Cassini, and even Decandolle, however, have so multiplied new terms, for every slight variation in the organs and appendages, that their works are often totally unintelligible without a glossary. Such a glossary, indeed, ought to be prefixed to every work of this kind; M. Richard's on the orchideæ, for example, as it cannot be expected that the elementary works can furnish this, when every day adds some new term, or rejects an old one. Sprengel has most judiciously omitted a whole host of such innovations. Those who relish such things, will be amply gratified by turning to the ponderous work of Mr. Gray. M.Sprengel says nothing of Decandolle's nucula,—gamopetalæ,—haustoria,—lecus,—spongiolæ; nor of M. Correa de Serra's chorda pistillaris,—stigmata radicum,—and induviæ; nor of Link's alabastrum; nor of Willdenow's ascidium and ochrea; nor of a thousand others, which would only have lumbered his book. He very properly leaves the explanation of these to the inventors. Sprengel himself is

an inventor in a small way, and, among other things, claims the distinguished honour of having called by the name of *dichogamy* the circumstance of males and females coming at different periods to maturity. The fact of this precedence in growth is well worth remark, and has been ingeniously supposed to be one of the causes of multiplying species.

It is a law, repeated in all the books, that no new word should be compounded both of Latin and Greek, such as *terminology*, and the like; but those who stickle most for such a law, transgress it in almost every term which they use,—giving us, what is worse than a compound of Greek and Latin, a compound of Greek and German, and Greek and English, *Taxonomie*, for example, and *Taxonomy*, instead of *Taxonomia*.

At present we must take leave of Botany, though we hope soon to have an opportunity of taking up the subject of MEDICAL BOTANY, in reference to the knowledge of it which is required for obtaining professional titles. We have before us also no fewer than three late works severally by Sir J. E. Smith, —Dr. Hooker,—and Mr. Gray, which we intend to review together, and give our readers a fair estimate of their value and accuracy.

HISTORY AND PRINCIPLES OF THE CONTRA-STIMULANT TREATMENT FOLLOWED IN ITALY BY RASORI, BORDA, TOMMASINI, MANTOVANI, FANZAGO, AND OTHERS.*

IF these books had been the records of mere theory, we should have read them to amuse an idle hour, as we read a romance; but we should never have taken the trouble to review

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* Storia della Febre Petecchiale di Genova. Del Profess. Giovanni Rasori. Primæ Lineæ, &c. Auctore, Syrus Borda.

Dell' Infiammazione e della Febre continna: considerazioni Patologico-Pratiche. Di G. Tommasini. 8vo Pisa, 1820.

Del Metodo di Curare, &c. Discorso pronunciato nella Clinica Medica della Pontificia Universita di Bologna. Del Profes. Giacomo Tommasini. Bologna, 1821.

Lezioni di Terapia speciale sulle Infiammazioni, e Rendiconto Clinico, Di V. Mantovani. 12mo. Pavia, 1820.

Institutiones Pathologicæ. Auctore F. A. Fanzago.

them, and tantalize our readers with useless fancies in the very place where they are looking for practical facts. This is not the case, though it has been so represented; for these works are full of interesting practice and ingenious experiment.

The Italian school claims for its founders the high praise of originality, and, what is more of success, in the treatment of diseases which were formerly ill understood, and of course mistreated. Nothing, indeed, is easier than to become original, provided that facts are not admitted to interfere with speculation; but he who is always ready to contradict others, cannot, we imagine, have any fixed opinion of his own; and his original views can be nothing more than common-place notions, reversed or transposed. Genuine originality, however, is a very different thing. It is only found occasionally to be in opposition to received and established opinion, by shaking off the fetters of prejudice and misconception; and by observing facts and circumstances in other aspects and relations, than those in which they have been formerly viewed, and in this manner truth is arrived at by a new and untrodden path. Whether Rasori, Borda, and their followers, have succeeded in their experiments and speculations, we shall be better able to judge after we have taken a survey of the events which led them to alter their former opinions, and of the principles which they now follow.

Rasori, the founder of this infant school, was educated at Edinburgh, at the period when the learning and ingenuity of Darwin had given a fresh impulse to the simple and ingenious, but inaccurate doctrines of Brown; and on his return to Italy he published an able translation of the celebrated Zoonomia, with notes, containing the first germ of the principles which he and his colleagues have since formed into the outline of a system. Even as early as 1796 he taught many of his doctrines in his lectures at Pavia. His scepticism in this early period of his career was only founded on a narrow induction; but having an opportunity of studying the petechial fever, which raged in Genoa during the blockade of 1800, his scepticism in the doctrine of Brown and Darwin was confirmed by assiduous and accurate observations at the bedside, and by numerous dissections. The Genoese epidemic appeared to arise from a deficient supply of provisions, which were also of indifferent quality, and perhaps from the prevalence of depressing passions, or from some unknown change in the air. It had altogether the precise character of what Brown called an *asthenic* disease, or one arising from debilitating causes; and agreeably to this view all the physicians in Genoa prescribed stimulants, and of course either greatly injured or killed their patients.

It was not new, indeed, among practitioners, to observe scarlatina terminating in dropsy, and to see dropsy cured by the detraction of blood, of which several instances, among others, are mentioned by the celebrated Frank, in the preface to his son's work, "Ratio Instituti Clinici Ticinensis." It was new, however, to detract blood, and use other active measures of depletion, in the class of fevers indiscriminately called typhus. Rasori was aware that some German physicians were prescribing dilute sulphuric acid in typhus, under the idea that the oxygen of the acid, neutralized the morbid accumulation of carbon and hydrogen in the system; but with all due respect for chemistry, he could not consider the stomach and blood-vessels to be like retorts and glass tubes, though he agreed with all his predecessors, that acids and sub-acids were refreshing, cooling, and sedative. But these same antiphlogistic sedatives were often prescribed with camphor, opium, ether, and wine, whose effect is directly contrary, and of course the one medicine counteracted the other. *(See Quart. Jour. of For. Med. IV.* 122.)

By thus observing the symptoms and course of the petechial fever, and the operation and effects of these opposite classes of medicines, Rasori was led to consider it not a disease of debility, but of an inflammatory nature, and he suspected dropsy to be also inflammatory, a suspicion which in this country has been advocated by Blackall, Abercrombie, and others. He says in the singular language of Brown, that both typhus and dropsy re *sthenic;* and further, he states that the *excitement* is not only the result of the stimulating action on the *excitability*, but that it is the compound result of *stimulating* and *contra-stimulating actions;* and that the *diathesis* in disease is merely the *state of the excitability*, together with the extension and degree of the morbid excitement. He still adhered, however, and does adhere, in all this, to the apparently absurd doctrine of Brown, that life is a state of perpetual warfare, as Gelmetti expresses it, between the excitable solids and the exciting fluids, and health a state of equipoise, in which neither of these predominates. Diseases again are either organic, hypersthenic, or hyposthenic.—These theoretical views we leave to the musings of poetical physicians—it is with practical facts that we are concerned.

Rasori taking opium as a decided stimulant, began jointly with Borda, to try along with it some of the more powerful medicines of an opposite class, such as the preparations of antimony and mercury, and he was not disappointed in his anticipations of their action,—namely, that they neutralized each other because the opium *stimulates*, and the antimony and

mercury *counter-stimulate*. He was equally successful with digitalis, hyoscyamus, and conium. Since the first promulgation of this doctrine it has been strongly supported, both by writing and in practice, by almost all the eminent physicians in the north of Italy. Its only opponents of name are Frederigo of Venice, and Spallanzani of Modena. who is nephew to the celebrated experimental philosopher of that name. Next to Borda, who is perhaps the greatest man in the school, though he has published but little, we may rank Tommasini of Bologna, who is much more clever and superficial than his two great masters, and is very fond of publishing and of talking. His style is rather flippant, and very diluted and verbose, though he usually contrives to make the little which he knows appear acute and intelligible, and, so far as they go, his works contain a very fair, though not a very profound view of the principles of Rasori and Borda. It was Tommasini who ambitiously called these principles the "New Italian Doctrine," an appellation which the modesty of its founders would never have dreamed of. We have not now leisure to characterize Brera, Mantovani, Fanzago, Rubini, Morichini, and others, who have recently kept up the high character of the country which produced Baglivi, Valsalva, Morgagni, Spallanzani, Mascagni, Borsieri, and Scarpa; but we hope to have ample opportunity, in subsequent numbers, to do justice to each of these able physicians.

We shall now give a more detailed account of the ACTION OF MEDICINES, according as they are classed as stimulant or contra-stimulant, and in order to afford a comparison with the views of Brown and Darwin, we shall draw out a table of these, with references to the Zoonomia.

Stimulants according to Rasori & Borda.	*Classed according to Darwin.*
Caloric	Incitantia
Opium	Incitantia
Musk	Revertentia
Ammonia	Revertentia
Alcohol	Incitantia
Cinchona	Sorbentia
Camphor	Secernentia
Red particles of Blood	
Grief	Torpentia
Joy, and other Passions, except Fear	Incitantia

Stimulants according to Rasori & Borda.	*Classed according to Darwin.*
Cold	Torpentia
Blood-letting	Torpentia
Mercury	Sorbentia
Antimony	Secernentia
Arsenic	Sorbentia
All metallic Medicines	Sorbentia
Bitters	Sorbentia
Emetics	Invertentia
Purgatives	Invertentia
Prussic acid, and cherry laurel water and oil	Incitantia

Stimulants according to Rasori & Borda.	*Classed according to Darwin.*
Animal Food ..	Nutrientia
Contagions of Miliary fever;	———
Typhus;	———
Small-Pox;	———
Measles;	———
Pemphigus;	———
Lues;	———
Rabid Poison.	———
Perspirable Matter.*	———

* As Darwin has not mentioned the action of any of the latter, we cannot give the comparison.

Stimulants according to Rasori & Borda.	*Classed according to Darwin.*
Digitalis	Sorbentia
Belladonna	Incitantia
Cicuta	Incitantia
Valerian	Revertentia
Coffee	
Mustard	Sorbentia
Pepper	Secernentia
Cantharides and Blisters	Secernentia
Nitre	Secernentia
Acids and oxygen	Incitantia
The Gastric juice	———
The Bile	———
The Urine	———

We shall next exhibit a comparative table of some of the doses of these medicines, given by Rasori and Borda, and those of the older school; for it is here their practice differs most widely, as they not only give much larger doses, but also give them more frequently.

Italian Doses of the Contra-stimulants.	*Common Doses of the older Practitioners.*
Submuriate of Mercury, from gr. xx. to gr. xxx. daily	From gr. i. to gr. xii. as alterative or purgative.
Tartar Emetic, from ϑ i. to ϑ viii	From 1-8th of a grain to gr. iii. as alterative or emetic.
Kermes Mineral, gr. iv. to gr. c.	From grss. to gr. vi.
Supertartrite of Potash, ʒiii daily	From ʒii. to ʒi.
Soda, ʒi to ʒiii daily	Not used.
Carbonate of Soda, ʒi. to ʒi. daily	From gr. x. to gr. xv.
Ammonia, ʒi. to ʒii. daily	From gutt. xx. to gutt. xl.
Carbonate of Ammonia, ʒ ss. daily	From gr. v. to gr. xv.
Muriate of Lime, ʒi. to ʒ ss. daily	From gr. xv. to gr. xx.
Gamboge, gr. vi. to gr. xxx. every three hours	From gr. ii. to gr. xii.
Pulvis Digitalis, gr. ii. to gr. xcvi. daily .....—	From gr. i. to gr. ii.

Italian Doses.	*Common Doses.*
Pulvis Radicis Belladonnae, gr. i. to ℈i. every three hours.	Not used.
Pulvis Fol. Belladon, gr. iii. ʒ ss. every three hours.	From gr. i. to gr. iii.
Extract. Hyoscyami, gr. ii. to gr. xxiv. every two hours.	From gr. i. to gr. iii.
Extract. Aconiti, gr. ii. to ʒiii. daily.	From gr. i. to gr. iii.
Pulv. or Ext. of nux vomica, gr. i. to ʒi. daily	From gr. iii. to gr. v. twice a day.
Aqua Lauro-cerasi from gutt. i. to gutt. c. every two hours.	Not used.

We shall now give a few Italian commentaries on the exhibition of these medicines, to obviate the misconceptions which might arise from the necessary brevity of a tabular view. In practice, the dose is proportioned to the quantity of excitement; and when, therefore, the inflammatory action runs high, the patient will bear very large doses without any obvious evacuation from the skin, stomach, or bowels, and the disease will be subdued, wholly by the contra-stimulant effect upon the fibres and other solids of the body. The great difficulty, (and it appears to us almost insuperable), must be the ascertaining, in any particular case, the proportion of excitement which is present; and unless this can be done, the physician must work in the dark in proportioning his doses. He can make trial, indeed, with small and frequent doses, and this is precisely the plan which Rasori and Borda follow, ordering their cherry laurel water, and their kermes mineral, and their emetic tartar, every two hours, till they can perceive some decided effect of contra-stimulation.

The test of the contra-stimulant power of medicines, is their obviating or counteracting the effects of some well-known and well-characterised stimulant. For example, as a man labouring under inebriation, from wine or ardent spirits, may, in a short time, be relieved by kermes mineral, James's powder, cherry laurel water, or belladonna,—the wine being a decided stimulant, those medicines which conteract it must be as decidedly contra-stimulant. Reasoning in a similar manner, they deny that purgatives stimulate the stomach or intestines; for though they evacuate their contents, their general effect is depressing; and they maintain that when the bowels are torpid in their action, it is because they have been stimulated to morbid excess, by the too copious use, for example, of aromatics, or wine; or by violent exercise, or excessive heat. Hence it is

impossible that the action of medicines, in promoting the secretions, can be stimulant; for if a stimulant be applied to parts already stimulated to excess, an increase, and not a diminution, of the morbid action must ensue. If it be objected that the continued use of purgative medicines will produce an inflammatory effect; they answer, that the same effect is produced by the most powerful contra-stimulant—cold, which induces inflammation and even gangrene; and they account for this by supposing, (for they are here obliged to suppose,) that a re-action takes place, in consequence of the congestion which the cold causes in the parts affected,—which re-action, though a consequence of the contra-stimulus, is not directly caused by it. This reasoning, however, seems to us to be abundantly gratuitous, and to accord very nearly with Brown and Darwin's asthenic inflammation, which, by the way, is opposed to the views of all the ancients, and the greater number of the moderns.—We must do the Italian physicians the justice, however, to say, that though they find some difficulty in maintaining a close argument upon this part of their doctrine, yet their general views seem to be capable of establishing the grounds of a rational and powerful practice, and this is of more value than the most ingenious display of argument.

Their description of INFLAMMATION, when produced, seems to be less objectionable than their account of its causes. Tommasini, in his work on inflammation and fever, tells us that the disease maintains itself independently of the cause which produced it; and although it may be apparently cured, it predisposes the parts affected to be more easily affected again by fresh attacks, though these are less perceptible, and less painful than the preceding. It proceeds then, it appears, from its commencement to its termination, with a certain course, its progress and increase being inevitable; while the inflamed parts bear so little relation to the degree of stimulus, and to the state of the other parts of the body, and are so isolated from the surrounding healthy parts, as to affect the general system in a greater degree than the system affects the parts which are inflamed. Again, while an excess of stimulus, such as arises from a coup de soleil, excessive exercise, or intemperate indulgence, yields to abstraction of stimuli and a state of repose; an inflammation, whether acute or chronic, mild or severe, when once excited and established, will not yield to the removal of its cause and to repose, but will run a certain course, though the exciting stimuli be entirely withdrawn. Like power, inflammation becomes thus a source of its own propagation;—it engenders a new stimulus, which can only be sucessfully combated by the medicines called contra-stimulant.

Even when inflammation occurs in a patient whose system is in a minus state of stimulus, it must, though local, be treated on general principles. When local inflammation arises in this way during genuine typhus, it will be improperly treated with stimulants, which would only exasperate the disease; for the alleged depression of the system, will not prevent the inflammation from running its course, with as much rapidity as though the system were tranquil. It is not, indeed, necessary for the system and the inflamed part, to be in the same state of excessive stimulus; yet, when this does occur, the local affection will be aggravated by the state of the system.

The Italian account of the EFFECT OF MEDICINES, is certainly the most novel and important part of their doctrine. It has been the custom to call such medicines as produce vigour or energy, *tonic*, or *stimulant*, which is to assume, that all diseases in which there is a want of tone, must proceed from a deficiency of stimulus. Tommasini says, we might as well argue that the prostration of strength in puerperal fever is the result of defective stimulus, or that bleeding is a stimulus, when it tends to restore the activity of a paralytic limb.

All medicines have two very distinct modes of action,—*absolute* and *relative*,—the absolute being that in which they affect the body in health,—and the relative, that in which they act variously, according to the kind and character of disease. Heat and wine, for instance, will produce debilitating effects, and feelings of weariness, when stimulus in the system is previously superabundant; but if the system is exhausted, and deficient in stimulus, they will prove restorative and invigorating. By not attending to this most obvious and important distinction, writers on the materia medica have often promulgated the greatest errors; and it is chiefly by keeping it constantly in view that Rasori and Borda have been so successful and so bold.—We shall take one or two examples for illustration.

CINCHONA has been, and still frequently is, administered in intermittents,—in phthisis,—in recovery from typhus and other fevers,—in acute and chronic inflammation,—and particularly in hopeless cases, as a palliative. The modes of administering cinchona are equally various and equally empirical. At one time, when a powerful stimulus is judged necessary, it is given in conjunction with wine or brandy; at another, when a stimulus of less power is required, it is joined with acids and bitters; at another, it is prescribed at the same time with depletion. Bark must surely be possessed of very singular properties to fulfil such opposite indications.

It was in consequence of these observations, that the Italian physicians were led to doubt the received opinions concerning the

ACTION OF CINCHONA; and to make experiments for themselves, to determine its real effects. In the CASE of a man of a corpulent habit, who was comatose, and somewhat apoplectic, Tommassini extracted about fifteen ounces of blood from the arm, which subdued the feverish symptoms, and the immediate determination of blood to the head. He then began with very large doses of cinchona, which were increased and persisted in till the patient recovered. He infers that his recovery might have been effected by the depletion alone, without the bark; but it proves, he thinks, that the bark has no stimulant properties, since it evinced no excitement in this very irritable patient. It order to demonstrate this view of the subject to his pupils at Bologna, Professor Tommasini, in 1816, made choice of a robust patient under a violent attack of pleurisy, and relieved him from the more distressing and inflammatory symptoms of stitch, cough, and fever, by bleeding and antimonials. He then made him take, in two days, two ounces of cinchona, in order to see whether any stimulant effect would ensue; but it could not be perceived that there was any renewal of pain or fever, and the patient got rapidly well, without the slightest appearance of excitement from the largest doses of the bark. Many other cases, of a similar nature, lead him to conclude that bark is a contra-stimulant, and to this property he traces its action in intermittents; and it is on the same principle that ARSENIC, which is a strong contra-stimulant,, has so powerful an effect in the same cases. It is well known, indeed, that arsenic will not succeed in intermittents attended with low and weak circulation.

With regard to CALOMEL and other mercurial preparations, it is known to every apprentice, that the effects, in different individuals, are most capricious and unaccountable. Sometimes even the largest doses will produce no evacuation; in other instances, a single grain will operate on the bowels most violently; while, in a third case, it will require to be conjoined with bleeding before evacuation is effected. The contra-stimulant powers of mercury are inferred from the soothing effects of calomel in irritability of the stomach, when aromatics, and opium, and soda water have been severally unsuccessful. The same is inferred from the sometimes apparently magical effects of the blue pill. In one of Abernethy's CASES, the patient was so wonderfully relieved from pain and restlessness by a single dose, yet without evacuation, that he could not be persuaded that it was not some preparation of opium, though opium had previously aggravated rather than relieved his complaints. It is argued that mercury acts by stimulating and emulging the biliary ducts,—they ask why it is given with success in hepatitis, in inflamma-

tory fever, and in incipient phthisis? and why some British practitioners affirm, that the power of mercury over incipient inflammation, in iritis for example, is one of the best ascertained facts in medicine? It is certain, that when mercury is copiously given to patients of weak habit, that it goes on to produce much greater debility than could be inferred from the slightness of the preceding mercurial fever,—often a complete prostration of nervous and muscular energy ensuing, which the most active stimulants may fail to restore.

One of the favourite Italian medicines is the CHERRY LAUREL WATER, or OIL, which, though it *may* derive its chief energy from prussic acid, has, perhaps, some vegetable property besides, which has not yet been properly appreciated. We think that the spirit of referring so much to chemical principles in such cases, is, though often laudable, at present much abused, and ought to be followed with great caution. Borda begins with it cautiously, drop by drop every two hours, gradually increasing, till he sometimes gives no less than a hundred drops a day, joining it, when necessary, with repeated bleedings. Magendie's experiments, indeed, seem to confirm the opinion that this powerful drug is contra-stimulant, if we do grant its identity (and we must admit its similarity) to prussic or hydrocyanic acid. On introducing into the mouth of a dog a few drops of this acid, he gasped violently once or twice, and dropped down dead; and the same consequence resulted from a single drop of the acid, applied to the eye of another dog; yet, on dissection, neither Magendie nor Orfila could discover any appearance of inflammation. With regard to the specific or elective action of the cherry laurel and the prussic acid, it appears that they have most influence over the lungs, as in phthisis. In this country, the prussic acid has been lately introduced, but does not seem to be gaining ground. It is certainly a very dangerous medicine to tamper with, particularly as its fine flavour tends to make it palatable. Magendie had a maid-servant, who, being enticed to taste it by stealth, expired almost immediately. It is preferred as a contra-stimulant, to digitalis, as the state of the pulse is in this case no guide in regulating the doses.

The preparations of ANTIMONY are also favourite contra-stimulants. At the very outset of his practice, Rasori remarked —what has occurred to all who have used kermes mineral, or tartar emetic,—that it, in some cases, acted violently on the stomach and bowels; and, in other cases, was apparently altogether inert; and though it had operated in removing the fever, no evacuation by the skin, the bowels, or the stomach, had taken place. He gave, in one CASE, sixteen grains of tartar emetic in

one day to a fever patient, aged twenty, and though no evacuation took place, the fever was greatly mitigated. Comandoli gave as much as five scruples of it in fourteen hours, without inducing vomiting or purging, though the circulation was lowered,—the respiration became more free,—and debility increased so much as sometimes to require a cordial. When nausea occurred, the dose was diminished one half. In the Medical Repository, (XV. p. 507,) a CASE is related, in which twelve grains of tartar emetic were given in half an hour, by Sir A. Cooper, for the purpose of producing nausea ad deliquium, the patient being at the time placed in a hot-bath of high temperature; but neither nausea nor vomiting ensued, though the patient lost the use of his limbs, and talked and behaved as if he had been intoxicated. Next morning he had almost no recollection of what had happened.—The Italian physicians would look upon this practice as quite erroneous; water, when it exceeds the temperature of the body, being, according to Franceschi, in his work on baths, a stimulant; and the bath, in this case, was as hot as the patient could bear. Of course it would require all the contra-stimulant power of the antimony, and more, to compensate the stimulant power of the hot water; and it might be the uncompensated effect of this which drove the blood to the brain, and induced a state similar to inebriation.

Several medicines are highly spoken of by Rasori and Borda, which are very seldom employed in this country, at least for the same purposes as in Italy. Among these we may reckon *belladonna* in hooping-cough, tic douloureux, and hydrophobia; the seeds of the water hemlock *(phellandrium aquaticum)* in catarrh, peripneumony, and in the earlier stages of phthisis, but not as Hufeland advises in the third stage; *gratiola* in dysentery and mania; and *aconite* in mercurial rheumatism and syphilitic pains, and particularly in the diseased secretions of the trachea and bronchia. Borda says he has often been astonished at the effect of the extract of aconite, in reducing not only the quantity, but changing the nature of the expectorated matter, and actually snatching the patient from death, which, like the stone of Tantalus, was hanging over him with threatening aspect. It is to be regretted, that this extract, like many others, is not always of uniform strength, and Borda had once, from this cause, nearly lost ten patients affected with phthisis,—delirium and other alarming symptoms having supervened; but by giving laudanum as a stimulant, he obviated the over-dose of this contra-stimulant, and his principles were strongly corroborated by the successful event.

As BLEEDING is allowed to be one of the most powerful con-

tra-stimulants from its abstracting the red stimulant particles of the blood, we might suppose that it would be a favourite remedy with Rasori and Borda. Their doctrine, however, leads them to go upon the rational principle of never using strong means when weaker will do as well; and though they often bleed, they do it in a similar way to that which they follow in administering other strong contra-stimulants, namely, taking small quantities at a time, such as six or seven ounces, and frequently, according to the necessity, repeating the venæsection, in the course of the day. They are much indebted to Gelmetti for his experiments and researches on this subject, although he leans too much, perhaps, to the sparing system.

It sounds somewhat strange to us, to hear BLISTERS and SINAPISMS ranked among contra-stimulants, though we hear enough of their curing diseases on the principle of counter-irritation. They argue, that as rubefaciants and vesicatories applied to the skin over certain glandular inflammations, often disperse the affection without vesicating the skin,—the whole force of the application is spent upon the disease, in the same way as tartar emetic when it fails to induce nausea or vomiting.

In distinguishing between IRRITATION and inflammation, and between the irritative and contra-stimulant action of medicines, the Italians have often lost sight of fact and induction, and framed distinctions so logically minute and wiredrawn, as to be nearly unintelligible. We may say, indeed, that on this subject they are completely out of their depth, so far as explanation goes; though records of their numerous cures can seldom be questioned; and this is of more importance than the *rationale* of action, which, indeed, can in so few cases be trusted to. Rubini's doctrine is similar to that of Fanzago, *(Institutiones Pathologicæ)*, Bondioli, and Monteggia, who teach, that gastric fevers, colic, hydrophobia, and tetanus, are caused by irritating powers producing irregular and discordant motions in the fibres and solids, and not by augmenting or depressing the excitement, as in the case of stimulant and contra-stimulant drugs. This, in fact, seems to be akin to the state in which the secondary symptoms occur from derangement of the digestive organs, that has been so well illustrated by Hamilton, Abernethy, and other distinguished inquirers in this country, but which, strange to say, has not yet received a name.

These very important and useful inquiries, the basis indeed of rational and successful practice, will again come in our way when we take up the opinions of Broussais, who has evidently founded his system on the Italian school, the chief difference being a more decided leaning to *Tisanism* and palliatives, and a

predominant dread of exciting irritation. The Italian practice, however, though somewhat peculiar, is far from being new in many of its leading points, though its peculiar phraseology gives it an air of novelty. It is gratifying, however, to see them giving up their trifling tisanes, and their sacred Theriaca Andromachi for a more enlightened system.—It may not be out of place to mention, that this same Theriaca was considered at Venice a matter of state policy. It was prepared with all solemnity, under the inspection of public officers, an official visit being previously paid to all the materials, liquid and solid, which were to be employed, and at a given signal a hundred mortars were struck by a hundred pestles. It was, in fact, a public spectacle for the Venetians, only inferior to the Saturnalia of the Piazzo San Marco, or to the marriage of the Doge with the Adriatic. When thus prepared it was delivered to numerous pedlars, who hawked it through all the towns and villages of Italy, proclaiming as they went "Teriaca di Venezia!"*

PROFESSOR OSIANDER ON UTERINE VAGITUS AND THE RESPIRATION OF THE FŒTUS.

To the Editor of the Quarterly Journal.

AT the sitting of the Royal Society of Sciences of Gottingen, on the 11th of November. 1820, the Director, Professor Osiander, read a memoir, containing a series of observations on the vagitus, respiration, and vitality of the human fœtus, during and immediately after parturition. He has, in this

* In a paper on the Italian doctrines, in a respectable cotemporary journal, we were surprised to see it stated that Tommasini talks of "A stimulant and contra-stimulant diathesis!" (*Med. Chirur. Rev.* II. *p.* 749.) We point out the mistake that it may be corrected. Tommasini could never have said so; he might as well have called tartar emetic a typhus fever. The Italian expression is "Diatesi di stimulo e di contro-stimulo."—We hope that this remark may not be considered, (as it is far from being intended), to be invidious. We shall, indeed, take it kind in return, to have our own errors and slips,—sometimes sufficiently numerous,—pointed out and corrected. Such little offices of friendly criticism are the best bond of good fellowship, and serve to promote the best interests of science—THE ESTABLISHMENT OF TRUTH.

paper, given the results of his experience on these points for upwards of twenty years. The principal facts are the following:

1. The human fœtus, whether full grown or premature, can breathe and cry when the head has passed the external parts, although it be closely confined from the narrowness of the parts, and whether the delivery has been effected by the natural efforts, by the hand, or by the forceps. The author has confirmed this assertion by twelve cases, for the most part observed in the lying-in hospital.

2. In difficult delivery, effected by the forceps, the child cries at the moment of the passage of the head, although the forceps have not been removed.

3. In nine cases the child breathed and cried as soon as the head was born, although the funis was twisted at least twice round the neck, and in some of the cases very tightly; in four cases the cry was heard and the child seen to breathe immediately after the funis was disengaged.

4. Two children of unusual size, of which one weighed ten pounds, cried as soon as born, although one had been fixed in the pelvis for two hours, from the narrowness of the genitals, and although the anterior fontinelle was perfectly ossified.

5. Two children cried immediately after birth, although the neck was compressed by the arm and hand, the latter having been expelled with the face.

6. *Four children* born with the membranes unbroken and transparent, *being surrounded by the liquor amnii, were seen to open and shut the mouth as a fish under water.*

7. This phenomenon was not observed in another, born under the same circumstances.

8. Two, on the contrary, opened the mouth, breathed, and cried, notwithstanding the face was covered with the empty membranes.

9. One child, born and covered wholly by the membranes, ruptured them and drew them over its face.

10. One child cried as soon as the head was expelled, although its mouth was filled with blood escaping from the mother.

11. *Some children delivered by the feet breathed and cried, although the head was still in the uterus.*

12. In one instance, the waters having escaped, and the pains being very severe, *the child was heard to cry in the uterus so distinctly, that many students present authenticated the fact by their signature in the note-book of the Institution.* The crying was heard under the same circumstances, in his private practice, by Professor Osiander, by the mother, and the standers by.

13. A dropsical child, extracted with much difficulty, gave signs of life.

14. A dead fœtus, affected with anasarca and ascites, according to the mother, moved distinctly before birth.

15. A child died during labour, and was extracted quite dead. Although no air had been inflated, the lungs were found considerably distended, and floated in water, a proof that respiration had been perfectly performed in the uterus before birth.

16. A deformed child, like a dead fœtus, breathed after birth with a sensible noise, and died in a few moments. On dissection no traces of air were found in the lungs, although they were very expansible.

17. A child, prematurely born, had the skin of an orange colour, and the cuticle was detached in many parts; it lived, sucked, and left the institution alive at the same time with the mother.

18. A blind woman was prematurely delivered from the effects of fright. The child breathed freely during delivery, but died in a few moments: the lungs sunk completely in water.

19. In a child born dying, blood flowed from the umbilical vein, although the circulation had ceased in the umbilical artery.

20. A child was extracted with the placenta, the cord being neither cut nor tied. Pulsation was observed for ten minutes in the umbilical arteries, but it was not until the child had freely breathed that the dark blue of the blood was changed into a bright red colour.

21. The heart and carotids pulsated for a length of time without respiration, but there was no pulsation in the umbilical arteries. Blood flowed when the jugulars were opened, but it was impossible to restore the child to perfect life, although powerful contractions were excited in the muscles for many hours, by the galvanic pile; the other signs of life were wholly lost.

22. A child had advanced very slowly during labour, and at last seemed altogether fixed. On examination, the very extraordinary observation was made, that the child held the umbilical cord firmly with its hand, so that it was necessary to open the fingers to set this part at liberty. At the institution of Gottingen, where it is customary to weigh all the children that are born, it is not uncommon to see some of them clasp the cords of the scales so firmly, that it is necessary to employ some force to oblige them to quit their hold. Should we any longer wonder that Hercules strangled serpents in his cradle?

Review of the Experiments on Absorption by the Veins, and on the Use of the Spleen.*

Although this is partly an inquiry of curiosity and speculation, yet it directly leads to so many views of practical utility, that we think it too important to be thrown aside among the abortions of theoretic fancy. We shall accordingly devote a few pages to the views of nervous absorption, which some recent experiments have revived, after they had been given up, from the time of Hunter and Cruikshank, by the greater number of physiologists. Darwin, indeed, describes the absorbent power of the veins, but thinks that it is this power which is the cause of the circulation in both the veins, the lacteals, and the lymphatics, referring, in his usual manner, to the analogy derived from vegetables. Dr. Hales, in his Vegetable Statics, proved, by experiment, that the force of the absorption in vine stumps is equal to the pressure of a column of quicksilver thirty-eight inches high, or of water twenty feet high; and Sir Astley Cooper, among his early experiments, found the absorbent power of the lacteals and lymphatics always burst the receptaculum chyli when he tied the thoracic duct in living dogs. Sir Astley concludes, *(Med. Researches,* p. 110,) that the contractile powers of the absorbents are hence proved to be very strong; for though the receptaculum chyli, which was the part ruptured, is thinner, and less capable of resistance than the thoracic duct, yet, as it is able to bear the pressure of a column of quicksilver, more than two feet high, the absorbent force must be greater than the pressure of such a column, as the living parts will resist a force which will readily tear them when dead. Dr. Hales also, by experiments on the crural arteries of the horse, the dog, and the fallow deer, found, by applying mercurial guages, that the vegetable exceeds the animal force, the absorbent force in

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* Article,—Absorption. Par M. Adelon. Dictionnaire de Médecine, 8vo. Paris, 1821.

Elementa Physiologiæ. Auctore L. Martinius, 8vo. pp. 459. Augustæ Taurinorum, 1821.

Memoire Physiologique sur les maladies purulentes et putrides. Par B. Gaspard. in Magendie's Journal de Physiologie. Janvier, 1822.

Versuche ueber die Wege, auf welchen Substanzen aus dem Magen und Darmkanal ins Blut gelangen; ueber die Verrichtung der Milz und die geheimen Harn-Wege. Von T. Tiedemann und L. Gmelin. 8vo. Heidelberg, 1820.

The Croonian Lecture. By Sir Everard Home. Philosophical Transactions. 1820.

the vine stump being five times greater than the arterial force in the horse; seven times greater than that in the dog; and eight times greater than that in the fallow deer.

The opinions of Darwin, however, had little influence upon other physiologists; and venous absorption was usually classed among exploded errors, till the recent experiments of Magendie, Flandrin, Meyer, Gaspard, and others, have gone far, if they are correct, to refute the conclusions of Hunter and Mascagni. Perhaps it may be useful, for the clearer understanding of the subject, to look back to some of Hunter's experiments. Having ascertained the office of the lacteals,—analogy led him to ascribe a similar office to the lymphatics. This was first suggested to him from finding, in an attempt to inject the testis with quicksilver, by the vas deferens, that the mercury not only filled the epididymis, and the tubuli joining it to the testis, but that the body of the testis gradually became more turgid and heavier—owing, in his opinion, to the injecting fluid having been extravasated, and taken up by the lymphatics. Professor Monro soon after made a similar experiment, and drew from it the same conclusions, claiming to himself the honour of the discovery, which gave occasion to a warm dispute between these two anatomists. Pursuing the views which this discovery presented, Dr. Hunter was afterwards induced to consider the lymphatics as the sole agents in absorption, to the exclusion of the nervous system. The experiments which confirmed him in this opinion were the following:—His brother, the celebrated John Hunter, having opened the belly of a living dog, the intestines immediately rushed out, and the lacteals were observed of a white colour at the upper end of the gut and mesentery, while, lower down, the liquor was transparent. He tied up the mesenteric artery and vein, which passed along about half a foot of intestine, and put a tight ligature upon the upper part of the intestine; then emptied that part of the gut, and put a similar ligature upon its lower part. He next made a small hole in the upper end of this part of the gut and poured into it some warm milk, stopping the hole by another ligature. The circulation of blood was prevented in this part of the bowel by the ligature. Lastly, he punctured the vein, beyond the ligature that had been made upon the mesentric vessels, and emptied it. The same experiment was performed, and in the same manner, on a part of the intestine lower down, where the lacteals were filled with a transparent lymph.

In the first experiment, the lacteals continued to be filled with a milky or white fluid: in the second, the lacteals, which before contained only a transparent lymph, were presently filled

with a white milk. In neither of those experiments, could any who were present observe, that the least white fluid had got into the veins. After some time, the bowels were restored to the abdomen, that the absorption might be encouraged by the natural warmth; then they were again taken out and examined; but the lacteals were still filled with milk, and there was not the least appearance of a white fluid in the veins. In a third experiment, he tied up and filled another part of the intestine, but did not make a ligature upon the mesenteric vessels. The blood in the veins of that part was carefully examined, but not the slightest difference could be observed in it. At last he took that part of the gut which was filled with milk, and pressed it very gradually, to see whether any milk would, by these means, pass into the empty mesenteric veins; but, although this was continued until the gut burst, there was not the least appearance of any thing milky in the veins.

He injected into the bowels of another animal starch coloured with indigo, soon after which the lacteals were filled with a fluid of a fine blue colour; the blood in the veins was unaltered; the serum, when afterwards examined, had not the slightest bluish tinge. An injecting-pipe was fixed in the mesenteric artery, when the intestine was filled with blue starch; all communication was cut off, by ligatures, excepting by the corresponding vein, which was left free; warm milk was then injected by the artery till it returned by the vein, yet in the milk in the vein no perceptible difference took place.

On the other hand, Lieberkun passing an injection into the vena portæ, has seen it issuing by the villi of the intestines; and M. Ribes performing the same injection with oil of turpentine dyed black, has had a similar result. But still more directly opposed to the experiments of Hunter, are those of Kaaw and Boerhaave, who having injected warm water into the stomach of a dog which they had just killed, by the aid of a slight pressure made the water pass into the mesenteric veins, so that these vessels became pale, and at last the water ran pure from the inferior vena cava. Repeating the experiment with coloured water, they had the same result. Flandrin gave to a horse a mixture of assafœtida and honey, and observed, that whilst the venous blood of the stomach and intestines exhaled the characteristic odour of the assafœtida, no trace of it could be observed either in the chyle or in the arterial blood. Magendie gave to a dog, while in the act of digesting, a quantity of water mixed with alkohol, with camphor, or with some odorous matter, and examining the chyle half an hour afterwards, he could not find in it any of these substances, whilst the blood

exhaled the odour of alkohol and of camphor; and these substances could even be procured by distillation, from the blood of the vena portæ. He gave also to a dog, four ounces of a decoction of rhubarb, and six ounces of prussiate of potash, and, half an hour after, could find no trace of either in the fluid of the thoracic duct, whilst both were found in the urine. He tied the thoracic duct of a dog, and then gave it a decoction of two ounces of nux vomica; but death was not retarded by the stopping of the duct. The result is the same if the decoction be injected into the rectum—a part of the intestinal canal where there are no lacteals. The abdomen of a dog, kept without food for seven hours, was opened, and a convolution of intestine was seized and isolated by two ligatures; all the vessels,—lacteals, lymphatics, arteries, and veins, belonging to it, were cut with extreme care; only a single artery and vein were left untouched. The portion of the intestine was next divided at the two ligatures, in such a manner that it ceased to have any connection with the body, but by that single artery and vein. An injection of nux vomica was next thrown into it, and six minutes after the effect of the poison was manifest.

Martini is quite certain that the veins are continuous with the arteries, and consequently cannot absorb poison applied to the skin. He agrees with Tommasini, that they absorb the blood; but will not allow that any other thing can be thus absorbed. When there is any apparent absorption by the veins, as in the circumstances mentioned by Monteggia, he thinks that there must be a solution of continuity, or rupture of the vessels; for so long as the radiculæ of the veins anastomose with the arterial capillaries, there can be no absorption. (VII. 302.)

Martini's argument, however, is quite gratuitous; for it is still a question by no means settled, that the veins and arteries do anastomose, or are continuous. Tiedemann and Gmelin, to answer the objection, as far as it applied to the passage of injected quicksilver into the absorbents of the intestines, carefully and cautiously threw quicksilver into the absorbents of the intestines of three human subjects, a cow, a horse, and two dogs, soon after death, and in all the cases, found it in the mesenteric veins and the vena portæ. On tracing its passage minutely, they found that the communication was effected in the mesenteric glands, as all the veins going off from a gland contained the mercury. Now, to talk of rupturing the vessels will not do; for though the quicksilver might have ruptured, by distention, the absorbent, it was flowing through;—how could it rupture

the vein, to which it must have been exterior, if the absorbents and veins do not communicate?

Dr. Somerville, of Philadelphia, on repeating Magendie's experiments, obtained results considerably different. In the experiment of the amputated limb of a dog, Dr. Somerville found, that neither the infusion of nux vomica, nor the moistened leaf of tobacco, produced the least effect in half an hour, though when the same were applied to the stump, the dog was convulsed in a few minutes, and died in fifty minutes. On repeating this with a distilled preparation of tobacco, the conclusion of Magendie was found equally unverified; and of course Dr. Somerville could not corroborate the fact of the poison being prevented from passing into the circulation by compressing the vein. Dr. Somerville next transfused blood from the crural vein of a dog, into whose leg poison had been inserted, into the jugular vein of another dog, without producing any effect in five minutes; yet, upon stopping the transfusion, the first dog exhibited immediate signs of poison. This is thought to be inconsistent with the conclusions of Mr. Brodie, that poisons taken internally act only through the nerves; but when applied to a wounded surface, are taken into the circulation by the divided blood-vessels; and the experiments with ligatures are thought to apply as strongly in suspending nervous communication, or at least in deadening the vitality of a limb, as in inrupting the flow of blood. He thinks that all poisons must operate on the nerves, from the action of belladonna in dilating the pupil when applied to the conjunctiva; and from the effect of *mineral poisons, even when applied to a wound, being always confined to inflammation of the stomach and bowels, and never to the wound itself.*

The experiments of Tiedemann and Gmelin confirmed those of M.M. Hallé, Magendie, Flandrin, and Dumas, that, with the exception of the metallic salts, substances taken into the stomach could not be detected in the chyle of the thoracic duct, by either their colour or smell, or any chemical test. Among the substances tried, were indigo, madder, litmus, rhubarb, gamboge, garlic, camphor, assafœtida, and alcohol. Yet are these experiments in opposition to those made by Lister, J. Hunter, Haller, and Blumenbach, who detected indigo, and rhubarb, and beet-root in the thoracic chyle. All agree, however, that these substances are unequivocally present in the intestines, and that they are also found in the urine, in the matter perspired from the skin, and in the exhalations of the lungs. Alcohol was found as far down as the smaller intestines, though the greater part of it disappeared in the stomach. Tiedemann and Gmelin

found many of the substances in the mesenteric veins, which they could not detect in the thoracic chyle. In the blood of the splenic veins, and of the vena portæ, as well as in the coronary veins of the stomach, they found musk, indigo, and rhubarb, though these could not be detected in the chyle of the lacteals or of the duct. They infer from this, that the veins of the stomach take up certain substances, and carry them through the vasa brevia into the splenic vein, and into the vena portæ, without passing through the grand channel of the thoracic duct. The experiments which favour this opinion, by Sir A. Cooper, Magendie, Meyer, and Sir E. Home, are well known, and need not be repeated. It affords a clear and satisfactory explanation of the fact, that, after eating, streaks of a milky appearance, similar to chyle, are fouud in the vena portæ. This fact has been repeatedly observed, from the time of Harvey down to the experiments of our authors.

The Heidelberg philosophers conclude, that substances taken into the stomach, may pass into the circulation, independently of the usual channel, through the radiculæ of the vena portæ, and through the absorbents, which appear to be continuous with veins, more particularly in the mesenteric glands. These glands seem to secrete from the blood a reddish, coagulating fluid, which forms the first colouring matter of the blood; while the substances which go by the route of the vena portæ, being mixed directly with veinous blood, do not require the addition.

These experiments, from their connection with the spleen, have led almost all those who have made them to investigate its office, which is by no means well understood, though we seem to be approaching nearer than formerly to a rational account of it. Sir E. Home's conclusions, indeed, when taken in conjunction with those of Tiedemann and Gmelin, carry us farther than any previous researches. Sir E. Home describes the spleen as consisting of blood-vessels, without any cellular membrane interposed between them, the interstices being filled with serum, and the colouring matter of the blood from *the lateral orifices in the veins* when they are distended. This serum is afterwards removed by the numerous absorbents belonging to the organ, and carried into the thoracic duct by a very large absorbent trunk. The spleen, therefore, he concludes, seems to be the reservoir for the superabundant serum, lymph globules, soluble mucus, and colouring matter of the circulation, immediately after digestion. The distensible property of the veins, which is remarkable in the enlargement and collapse of the spleen, during the process of digestion, which was observed by Mala-

carne and Lieutaud is one of the strongest proofs of this opinion.

When we join with the conclusions of Sir E. Home the experiments of the Heidelberg philosophers, our views of the office of the spleen are still farther enlarged. They regard the spleen much in the same light as a mesenteric gland, which has no excretory duct except large lymphatic vessels,—which opinion they ingeniously support from the fact, that in all amphibious animals the spleen is not connected with the stomach, but with the intestines. They also agree with, and confirm the opinions of Ruysth and Hewson, that the spleen separates from the arterial blood a reddish coagulable lymph, which is carried forward by the absorbents to the thoracic duct, and forms the first colouring matter of the blood. It has long been known that the thoracic chyle is of a roseate colour, and speedily coagulates on cooling; and that on being exposed to oxygen gas, it acquires a crimson tinge, somewhat like arterial blood. The same is true of the chyle after passing the mesenteric glands; but after the entrance of the splenic absorbents into the thoracic duct, the red colour is still more vivid. On removing the spleen from a dog, healing up the wound, and sometime after killing the animal, they found the thoracic chyle watery, scarcely reddish till it was exposed to the air,—and on cooling it shewed little crassamentum,—while the mesenteric glands were evidently enlarged, in order, as was conceived, to make up for the want of the spleen, on the same principle as the branches of an artery enlarge when a ligature is put around its trunk.

We concur, so far as the evidence of these researches is correct, with M. Adelon, who, after weighing the several opinions respecting venous absorption, concludes, that the veins and absorbents are both employed in absorption. If the opinion be well founded (though it still requires tobe farther investigated), it gives much value to the experiments of M. Gaspard, upon pus and putrid vegetable matter injected into the veins, by which he was able to produce some of the inexplicable symptoms of diseases, and of course to bring us nearer to an explanation of their causes. In his sixteenth experiment, for example, M. Gaspard prepared from the leaves of cabbage, fermented for two days in an equal volume of water of 20° Reaumur, a fœtid liquid, of a thick consistence, and having no acidity. Of this, he injected two ounces and a half into the right jugular vein of a large dog. During the injection the animal vomited repeatedly, and some hours after, it manifested all the symptoms of peripneumony; and in about nine hours the fæces were voided twice very copiously, of a liquid form and exceedingly fœtid, black like soot,

and similar to the dejections in melæna,—being chiefly mucus and putrid looking blood, with very little proper excrement. On the fifth day it died, with all the symptoms of putrid fever, of the most aggravated form. In repeating this experiment with other putrid vegetable matter, the results were precisely similar. M. Magendie thinks, with much plausibility, that both melæna and the black vomit in yellow fever, may be caused by some such putrid matter vegetable or animal, in the circulation, as that introduced in the experiments of M. Gaspard.

On introducing similar substances into the circulation through the absorbents of the cellular system, the results were somewhat different; because, as M. Magendie remarks, in the first case the putrid matter circulates immediately all over the body; while, in the second, it is introduced very slowly, the blood-vessels in the cellular tissue being but few in number, and also the contact of the substance introduced inflames the cellular veins, and the absorption is thus diminished.

One important remark which M. Gaspard has supported, is, that local putridity may take place in our organs, even previous to death, or to general disease; and of course if the putrid matter be carried from these into the circulation, similar symptoms will follow to those observed in the experiments. He quotes the numerous experiments of Mr. J. Grainger, upon the urine, saliva, blood, fœces, and sweat, of patients who had been over-dosed with mercury, as tending to the same conclusion; and M. Magendie has also corroborated the same view by his experiments with camphor and phosphorus. The breath is considered one great test of the existence of putridity in the system, being "le plus grand émunctoire de l'économie." Excessive fasting, or great depletion, M. Gaspard thinks may give origin to a degree of putridity which may prove fatal, producing what are called passive or intestinal hæmorrhages, scurvy, putrid fever, salivation, and plague. He refers to a similar cause the fœtid odour of the breath, after sleeping and fasting during the night, and after religious fasting, or involuntary hunger. In these cases all the animal fluids run rapidly to putrefaction, as was proved by the experiments of M. Deidier, on the bile and urine of patients who died of the late plague at Marseilles.

All the experimenters agree in rejecting Darwin's notion of the retrograde motion of the absorbents, from which he explained the rapid passage of fluids into the urine. There was, indeed, something ingenious enough in Darwin's opinion, but ingenuity must always bend to fact. Even if we were to give up the experiments of Sir E. Home on the spleen, we could easily

explain the rapidity of the secretion of urine, by the rapidity of the circulation of the blood, which usually performs its course in three minutes, and by the numerous villi of the intestines, in each of which are placed the mouths of several absorbents, amounting, perhaps, to three or four millions. The experiments of Rasori on a kid, to which he gave rhubarb, which in half an hour was found in the urine, and also in the lacteals, led him to the opinion that it was by these, that fluids reach the bladder. Tiedemann and Gmelin, however, seem to have, in some measure, set the question at rest, by finding the indigo which they had given to a horse, in the urine, the urinary absorbents, and the infundibula of the kidneys; and though the stomach and intestines also contained the indigo, none of it was found in the chyle of the lacteals, and they conclude that it must have passed immediately into the veins of the stomach and spleen.

M. M. Parent-Duchatelet and L. Martinet on the Theory and Treatment of Arachnitis.*

The authors of this work claim the high merit of having made important distinctions, which have hitherto been either overlooked or disregarded. They claim the merit of distinguishing inflammation of the arachnoid membrane of the brain and spinal marrow, from inflammation of the substance of the brain itself; and that they can, by the train of symptoms, form a diagnosis, when either of these two classes of affections exist, and can accordingly adapt their treatment to each. Now, though we object, *in limine*, to their evidently too hasty generalization, and to the sometimes imperceptible niceness of their distinctions; yet are we willing to bestow the highest commendation on their cases of morbid affections, and their description of the coincidence observed between certain symptoms and certain appearances, which were observed in post mortem examinations.

Of inflammation of the arachnoid membrane we were possessed of but few details previous to the present work. Morgagni says

* Recherches sur l'Inflammation de l'Arachnoide, Cerebrale, et Spinale, ou Histoire Theorique et Pratique de l'Arachnitis. Par P. Duchatelet, M. D. &c. et L. Martinet, M. D. &c. 8vo. Paris, 1821.

nothing of it, and Baillie in his Morbid Anatomy says, that almost the only diseased affection of the membrane is, a certain thickening of its substance,—blood-vessels ramifying through it being few and rare. We have, besides, the high authority of J. P. Frank for rejecting the minute distinctions between inflammation of the different membranes, and substances connected with the brain; and for the best possible reason—that the symptoms are common and the treatment the same.* The Italian pathologists expressly *deny that the arachnoid membrane can be inflamed at all*, and refuse to admit the authority of Pinel (*Nosogr. Philosoph. II.* 403), who is the first writer, we believe, that mentions the subject, and think that he mistook for inflammation the turgidity of the vessels consequent upon inflammation of the meninges, or of the substance of the brain, a phenomenon well described by Mascagni. (*Prodrom. di Anat. fas. III. Oper. postum.*) Even Pinel himself allows, that though the brain and its membranes, (among which he expressly includes the arachnoid), may be separately inflamed, yet it is next to impossible to discover by the symptoms when it is the one and when the other. But even granting that the symptoms may sometimes lead to an accurate distinction, we cannot perceive its utility in a practical point of view; as the practice must be the same in both cases. (*Barzellotti, Medicina Practica Razionale, I.* 117.)

We must do our authors the justice of having been very persevering in their researches. They were aware of the objection arising from Mascagni's descriptions, and expressly assert that inflammation of the arachnoid is easily distinguished from congestion in the vessels of the pia mater, by raising it with the scalpel, as it will, in the latter case, appear transparent, but when inflamed, it will appear opaque, reddish, and often thickened. When there does appear the blush of inflammation, it is generally in patches, being rarely found to extend over the whole brain; and it is from this confined locality of it, that it has so often been overlooked in dissections. When, therefore, the inflammation goes on to produce thickening and opacity in the membrane, this is also in detached portions, or in spots and lines. Sometimes the acute symptoms terminate in suppuration, but oftener in serous effusion or in adhesions. In other cases is found a false, or what Beclard would call an accidental mem-

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* "Inflammatorum interim," says Frank, "vel cerebri, cerebelli, vel integumentorum iisdem communium symptomata, ob hanc sedis differentiam nullo inter se, quod constans, firmumque esset, signo distinguenda, in sequentibus fere observantur." J. P. FRANK, *De Curandis Hominum Morbis*, II. 51.

brane, covering the whole or the greater part of the arachnoid, particularly on the upper part of the cerebrum and cerebellum.

The SYMPTOMS are divided, with all appearance of precision, into three stages. Of these, the *first* is characterised by increased sensibility, producing intense head-ache and fever, accompanied, but not uniformly, with drowsiness,—with nausea and vomiting,—and sometimes with coma. The *second* stage succeeds for the most part very rapidly, though sometimes it may be retarded for several days. It is marked by less sensibility, but by all the symptoms of nervous derangement, such as restless jactitation, delirium, convulsions, and various affections of the eyes; coma and head-ache being less constant, though never wholly absent. The *third stage* comes on generally in a few days, though in some cases it may be more than a week. It is known by decided coma, loss of sense and of the power of motion. The authors confess, that in this stage they are completely baffled in discriminating arachnitis from other cerebral inflammations; yet they imagine it easy enough to tell by the eyes, and the facial muscles, what part of the arachnoid membrane is inflamed! This, we think, is carrying distinctions as far as the minutest nosologist could desire. We should be glad to find them equally precise in their means of cure, since they are so anxious to establish the various diagnoses of the affection; but this is unfortunately beyond their genius.

Their TREATMENT presents nothing peculiar, if we except its timidity, in a disease which requires such bold and decided measures. We have the usual routine of antiphlogistic remedies and regimen, such as blood-letting by venæsection and leeches; —sinapisms to the soles of the feet, and a hot bath for the feet, composed of water with mustard and salt;—pomatum of ammonia applied to the scalp,—blisters,—cathartics,—ice or cold water, applied to the head, or affused over the head and body, of which remedy they speak highly,—compression of the carotid, as recommended by Blaud,—and, in fine, keeping the head elevated. They reprobate the attempt to operate with the trephine, and they are right when the disease is not caused by contusion or fracture, but otherwise, we think their reprobation is contrary to sound practice.

Nothing could be a stronger proof of the spirit of making distinctions being predominant in the minds of our authors, than their attempt to establish a diagnosis in what they call *spinal arachnitis*, though they ingenuously confess, that they never met with a case uncomplicated with cerebral arachnitis. But that their suppositions have at least been fortunate, they have reason to congratulate themselves,—for some of their

friends who have met with genuine cases without complication, assure them of the correctness of their diagnosis. The leading characteristic of it is spasm of the posterior muscles of the body, and intense pain in the course of the spine, or its vicinity, with a spasmodic or a voluntary bending of the spine backwards. The treatment is precisely the same as that already detailed; and it ought to be remarked, that the French physicians are not so forward to follow active practice as they are to recommend it. There is a wide difference between the boldness of their words and the timidity of their deeds, several very striking examples of which are detailed in this singular work.

Upon the whole, we should advise our readers to refer to their details; though these, particularly in the morbid anatomy, are much more meagre and vague than could have been anticipated, when their doctrine is so essentially founded on them. Besides, the vagueness of their descriptions of the inflammatory appearances in the arachnoid membrane, give rise in the reader's mind to a suspicion of the authors' accuracy, which greatly detracts from the confidence he can place in their acuteness and observation. If their claims to originality, indeed, had been more humble, they would, we are confident, have been more successful.

BARON LARREY ON YELLOW FEVER.*

WERE we not aware that the profession have been quite satiated of late with discussions upon epidemics and yellow fever, we should have been tempted to discuss the subject at length with Baron Larrey; for though his *brochure* is in small compass, some of his opinions are sufficiently singular, and from a man of his celebrity, ought not to be quietly allowed to become a portion of the medical creed of his country without undergoing some scrutiny. We do not intend to enter into the dispute about contagion, which we still think is by no means understood or settled, notwithstanding the number of works and papers to which it has given rise. We venture, without fear,

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* Considerations sur la Fièvre Jaune. Par Le Baron Larrey, D. M. C. &c. Seconde edition. Paris, 1822.

to give this as our opinion, at the hazard of being arraigned by the several parties for want of industry in reading their arguments, or for want of acuteness or of candour in deciding upon their force. To defend ourselves from such charges, we beg merely to state the names of those who have espoused the different sides of this question, on each of which, will be found ranked, many of high respectability. We are chiefly indebted for our catalogue to a very learned paper on the subject, by our friend Dr. Copland, in the Repository for January last.

Among those who consider yellow fever to be an imported and contagious disease, are ranked:—Arejula, Batt, Berthé, Dalmas, Sir J. Fellowes, Moreau de Jonnés, B. Progetto, Salgado, &c., who founded their opinions on the yellow fever of Spain;—

Bally, Sir Gilbert Blane, Caizerques, Chisholm, W. Currie, Des Portes, D'Oyarvide, Lind, Ried, &c., who derived their facts from the West Indies and America.

Among those who deny that yellow fever is contagious, and assert its origin to be entirely local, or dependent upon some mysterious and inappreciable change in the atmosphere, are ranked:—Amiel, Burnett, Cassan, Doughty, Keutsch, Lacoste, Langermann, O'Hallaran, &c., who drew their observations chiefly from the fever of Spain;—

Bancroft, Barker, Browne, Comstock, Clarke, Coventry, Davidge, Denmark, Devéze, Dickson, Ferguson, Gilbert, Hillary, J. Hunter, R. Jackson, Jefferson, M'Arthur, M'Lean, E. Millar, Moore, Mosely, Musgrave, Muttlebury, Ramsay, A. Robertson, B. Rush, Savarési, Selden, Sheppard, Trotter, Valentin, Vanel, Veitch, Whitehead, &c., in the West Indies and America;—and in Africa, Drs. Copland and Winterbottom.

Among those who hold a middle course, allowing the local origin of the fever, but asserting that it may become contagious, we find:—Eymann, Hosack, Humbolt, J. Johnson, Le Blond, Nicol, Palloni, Pugnet, Romans, &c.

After this proof of the diversity of opinion on the subject, we think we are strongly justified in suspending our opinion, as to the merits of the several arguments, till something be discovered more decisive than has yet appeared.

The departure of M. Pariset, with the other physicians deputed by the French Government to visit the South of Spain, for the purpose of investigating the nature of the disease which committed such ravages there during the past year, has been the cause of the publication of this memoir. It had already made its appearance in the 38th No. of the Journal Complementaire du Dictionnaire des Sciences Médicales, August,

1821; but as this was insufficient to satisfy the anxiety evinced by the public to peruse this little work, M. Larrey has been prevailed upon to allow of its publication in a separate form. It has now received the addition of the letter to M. Pariset, by which it was accompanied, and the report made upon the treatise to the Academy of Sciences, by M. Portal.

The letter to M. Pariset is occupied by some very useful precautions necessary to be observed in the communication with those affected with contagious diseases, in the performance of post mortem examinations, and for the purpose of preserving the public health.

M. Larrey thinks, in common with many of his countrymen, that the YELLOW FEVER consists in inflammation, of greater or less severity, of the biliary system, the intestinal canal, and the serous membranes. He considers himself justified in this opinion by the results of the examinations he has made after death; an evidence, we think, not to be too implicitly depended upon. M. Larrey says that the principal causes of this disease are, hot and moist climates, intemperance, spirituous liquors, &c. On the subject of contagion he holds some peculiar opinions. He divides virus into two kinds; the one fluid, as in syphilis, small-pox, and vaccina; the other gaseous, or miasmatic: of this last sort is the virus of the yellow fever. Each virus has a particular influence on certain parts. That of the yellow fever acts particularly on the nervous system of animal and organic life. It is connected with the lymphatic system. According to M. Larrey, it is the most subtle and fugacious of all. It lasts but a moment at the highest point of disease; and then loses the power of transmitting itself. It is principally seated in the exanthema when this exists, and in the cutaneous transpiration. It is in this manner that M. Larrey endeavours to reconcile the contradictory opinion of physicians on this subject. He is, however, an advocate for measures of precaution; for if, says he, one patient only out of a hundred be capable of transmitting the disease, prudence requires that the whole should be sequestered, as it is impossible to ascertain the individual by whom the disease may be perpetuated.

The TREATMENT of the disease which M. Larrey recommends, is consistent with the view which he adopts of its nature. In the first instance, bleeding from the jugular vein, or from one or both of the temporal arteries, with the application of ice or iced water to the head, produce the best effects. The irritation and inflammation of the intestinal canal may be best combated by the application of puncture cupping to the lumbar and hypochondriac regions, in parallel lines following the course of the

nervous fluid, from the positive to the negative pole.* In the second period, M. Larrey recommends slight purgatives, e. g. calomel, from two to ten grains, according to circumstances, cold drinks, and emolients. In the third stage, slight tonics, cinchona, bitters, camphor, and neutral salts. In the last place, for the precautions necessary to the preservation of health, the Baron refers us to the work of Dr. Descourtils, entitled "Guide Sanitaire des Voyageurs aux Colonies. 1816."

Retrospective Review.

Symptoms and Treatment of intermittent and continued Gastric Fevers. By John Peter Frank. †

We offer no apology for making choice of this subject. Frank is one of the most practical and useful writers of which the annals of medicine can boast. His writings, indeed, constitute a new era in the practice of the continent; for, unlike many of his countrymen he did not seek for fame in misty speculation, but bent his great powers to the rigid observation of facts, which led him, as they will always lead the judicious, to discard much of the erroneous practice which is founded on false hypotheses, and to adopt rational and decided measures suited to the case, and not to the preconceived theory.

Frank, for example, was with Grappengeisser among the first who ventured upon depletion in dropsy, a practice which the very excellent work of Dr. Blackall has since so successfully advocated in Britain. The great work of Frank is still incomplete, but we hope that he has left materials to perfect what is wanting. In the mean time, notes of the whole have been published—surreptitiously taken, if we mistake not, from his admirable prælections. We are aware that several of our

* *Quart. Journ. For. Med.* Oct. 1820. v. ii. p. 394.

† De Curandis Hominum Morbis Epitome Prælectionibus Academicis dicata. Auctore, Joanne Petro Frank, 12mo. Venetiis, 1805. Tom. I. De Febribus.

readers possess the work, but still it is by no means a common book in the libraries of practitioners in the country and in the colonies, and still less so of our junior subscribers, whose liberal support binds us in gratitude to furnish them with what they may find useful, or may save them time in consulting.

A great proportion of diseases are, it is well known, developed in the stomach and intestines, and particularly a numerous train of fevers arise from offensive or stimulant substances in the bowels. When these affect the digestive organs, the heart and arteries, as well as the whole nervous system, are, from their intimate connection, also affected, and the fevers which thence originate become, according to circumstances, *intermittent* or *continued*. In other cases, the fever may be accompanied and exasperated, though not caused, by phlegm, bile, intestinal worms,* or other irritating matter, and even when these are evacuated it may not be materially relieved without having recourse to other measures. In both of these circumstances, Frank thinks he is justified in naming the disease GASTRIC FEVER.

INTERMITTENT GASTRIC FEVER is often complicated with inflammatory and nervous symptoms, the *former* occurring in plethoric patients during spring and after repletion, and characterised by longer paroxysms at the access of the attack, and by high bilious inflammatory fever;—the *latter* occurring in summer or autumn after hot weather, in consequence of the copious secretion and disordered state of the bile, the suppression of perspiration, or, perhaps, from contagious matter lodged in the abdomen, taken into the secondary passages, and diffused through the system.

The SYMPTOMS of periodic intermittent gastric fever, when not thus complicated, are anorexia, fetid breath, and bitter taste in the mouth, tongue loaded with yellowish viscid mucus, acrid eructations, nausea, tremor of the under lip, oppression, gnawing or burning heat of the stomach, frequent hawking and spitting, and vomiting, weight in the head, vertigo, head-ache, anxiety, eyes yellowish, diarrhœa, fæces rather fetid or verminose, urine changing from reddish to yellow, thirst and longing for acids. At the access of the fever many of these symptoms may be wanting, but the manifest relief consequent upon evacuation, will sufficiently mark its character when they are doubtful.

The COMPLICATION with *inflammatory fever* may be known

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* Those who wish to see Frank's account of Worms, will find an excellent critical detail of his practice, by our friend Dr. Copland, in the Repository for February last.

by the greater flushing in the face and eyes, and over the whole skin, the hot stage rapidly succeeding the cold, the violent pulsation and distension of the carotid arteries, severe headache, drowsiness and delirium, with great thirst, constipation, copious perspiration, and ardor urinæ. This complication requires to be well understood, as, according to circumstances, the one train of symptoms will predominate over the other. When it is complicated with nervous fever, it is more apt to tend to the continued form, and all the symptoms already stated are much aggravated.

In referring gastric fevers so indiscriminately to BILE, many serious errors may be committed which the cautious observer may readily avoid. The liver, indeed, being so large an organ, is capable of copious secretion, and bile, from the heat of the weather or of fever, is very liable to accumulate and become morbid, either in the liver itself, the gall bladder, or the bowels, and of course when too copious, or when unhealthy, it must give rise to morbid irritation;—yet does experiment upon healthy individuals clearly prove, that the great quantities of bile sometimes ejected from the stomach are not morbidly accumulated, either in the gall bladder or the intestines, before vomiting is excited, as happens in those who are unaccustomed to the motion of a coach or of a ship, and in the early stage of pregnancy. In such cases it would certainly be wrong to infer, that the ejected bile has been the cause of the vomiting. Neither ought we to depend too much on the altered colour of the bile as a proof of its being unhealthy, for it may be ejected of a green colour, in consequence of accidental mixture with acids, from painful dentition, from the affections of passion, and many other causes. We might as well infer a morbid superabundance of salt in the tears to have been previously accumulated, because from grief a copious flow of the saltest tears is excited. The nature and the abundance, indeed, of the secretion, depends chiefly on the increased action or diseased state of the secreting organ.

Taking all these circumstances into consideration, it would, perhaps, be most correct to say, that the overflow or the alteration of the bile, is rather the effect than the cause of fever, which probably lies in something very different from the matters in the stomach and bowels. We cannot depend much more on the appearance of bile in the blood, as a similar appearance may take place in health, or even when the bile is not superabundant, as in cachectic cases, though the colour is pronounced bilious, yet can it not be proved that the bile superabounds in the blood; and though this could be proved it would bring us no nearer the

cause of the fever; for when, as in jaundice, the bile is copiously found in the veins, neither gastric fever nor bitterness in the mouth is produced. Since it appears, therefore, that bile is not so frequently as is supposed the cause of gastric fevers, and since emetics and other evacuants, by increasing its secretion, may be the only cause of its appearing copiously in the ejecta,—the rash exhibition of these, as it may give rise to other diseases, ought to be carefully avoided. Whatever, therefore, it is concluded, determines the blood to the liver, or stimulates it to increased action, such as heat, anger, lust, and the suppression of perspiration, will give rise to an overflow of morbid-looking bile in the highest state of health.

When extraneous, irritating substances accumulate in the primæ viæ, such as the remains of indigested food, in consequence of feasting and surfeit, and putrid intestinal worms, they often become the cause of gastric fevers. Those who think that such fevers are more readily produced by animal than by vegetable food, forget that when eaten in moderation, animal food is much more easily digested than vegetable food, and is less liable to putrefaction; and hanker after the theory of those writers who think fever is caused by the putridity of the blood. The fact also of the poor, who are every where forced to be contented with vegetable food, being most frequently afflicted with fevers of this kind; and there being no apparent disproportion, in this respect, between those who, under a warmer sky, consume less animal food, and those who, in the northern climes, indulge in it copiously, leads to the same conclusion. The heat of the weather, he thinks, is only entitled to consideration, from the perspiration being more easily suppressed, in consequence of its great abundance, and this more particularly where humidity prevails.

In cachectic habits, when the fibres are lax, and when life is spent in indolent repose, MUCUS accumulates in the intestines, and, by its adhesive and glutinous nature, and by its liability to become acid or putrid, gives origin to many disorders. But by following the same train of ingenious observation as we have just detailed, respecting the bile, our author justly remarks, that this superabundance of mucus may as frequently be an effect as a cause of the fever, and gives appropriate instances of this from the affections of other mucous membranes, such as the urethra and the fauces. The abundance of the mucus besides is not confined to the intestinal canal, but is found in almost every part of the system, even the blood detracted in this sort of fever, appears to abound with gelatinous mucus,—and gives some foundation for the name of a general catarrh, with gastric and nervous symptoms, which Frank thinks may be adopted.

The first indication of CURE, in gastric intermittents, is to dissolve the glutinous and viscid matters which are usually present in the intestines by acidulous draughts, such as lemonade, whey prepared with tartaric acid and tamarinds, decoction of endive, and—

1. ℞. Rad. graminis, ℥j
Coque in q. s. aquæ ut colatura sit ℔ ij.

This is to be followed up, unless great sensibility or a dry temperament forbid by expelling the offensive contents of the bowels, with saline medicines, such as sal ammoniac, and—

2. ℞. Crem. Tart. pulver. ℥ss.
Tartari emetici, gr. j.
Misce exacte, et divide in vi. partes equales ;—
or the saline draught.

3. ℞. Spiritus Mindereri,
Infusi Sambuci, ā ā ℥iij.
Oxymelis simplicis ℥j.—Misce, &c.

The resolution of the offensive matter is indicated by the diminished tenacity of the mucus on the tongue, by diarrhœa, spontaneous eructation of bile, and increased straining to vomit. When the offensive matter appears to be chiefly congested about the stomach and liver, an emetic is to be preferred; when in the intestines, a purgative. Three grains of tartar emetic, dissolved in three ounces of water, will answer very well; or if diarrhœa be present, twenty grains of ipecacuanha, with one grain of tartar emetic. The best time for giving the emetic, is a short time previous to the expected paroxysm, which will both clear the stomach and duodenum, and even sometimes prevent altogether the access of the attack. When the fit has come on, the success of an emetic, though in some cases it might be advantageous, is, upon the whole, doubtful, and is sometimes, during the spasmodic action of the stomach, not without danger. Upon the unfounded hypothesis of an internal transpiration, similar to the external, some advise emetics after the paroxysm; but unless the patient be robust, the debility and exhaustion then existing would deter us from such a measure. Sometimes it may be useful to give both an emetic and a purgative, in which case, Frank prescribes.—

4. ℞. Salis Anglici, ℥j.
Tartari emetici, gr. ij.
Solve in aquæ distill. ℥vj.

This treatment is to be continued and repeated, according as

the case indicates; and followed up with cathartics or laxatives, such as a drachm of jalap, with a scruple of sulphas potassæ, or senna, with salts and rhubarb, or manna, till the fever be brought to the form of a simple nervous intermittent. When the exhaustion consequent upon this disposes the patient to irritability, obstructions, and dropsy,—ipecacuanha, from one grain successively increasing to twenty grains, will often dispel the fever; and tartar emetic is equally valuable in doses of half a grain, a short time before dinner and before going to sleep.

When inflammatory symptoms accompany the fever, bleeding must be had recourse to in the first instance; and when it is complicated with nervous fever, the treatment above recommended may be pushed a little more boldly. In convalescence, the bark is to be joined with the muriate of ammonia, and serpentaria; generous diet, a moderate use of wine, country air, and exercise; and after some time, bitters with aromatics, such as two drachms of gentian, in four ounces of aq. Menth. or vin. Cyprini.

In CONTINUED GASTRIC FEVERS* the causes seem to be very much the same as in the intermittent form, and they may in like manner be either sporadic or epidemic; in some marshy situations they are almost endemic. It chiefly attacks those of a cachectic, lax, and feeble habit; or those who take little exercise, and live on viscid and indigestible food.

Our author gives a very minute and accurate detail of the numerous SYMPTOMS which mark the varieties of the disease, of which we shall give a full abstract. It begins, like other fevers, with alternate cold, shivering, and heat, accompanied with lassitude, head-ache, and pains similar to rheumatism in the back, the loins, and the joints. The face becomes pale and the eyes yellowish; but the stomach is chiefly affected with inflation, tension, and a sense of weight, joined with anorexia, loathing of food, nausea, retching, and eructation of disagreeable flatus, and of bilious, tenacious, acid, or acrid matter. The state of the mouth is the best indication of the state of the stomach, which is observable in the fœtid breath, the tongue

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* This constitutes the second genus of his second order, and is thus described—Febris *Continua Gastrica*, ex infestis in alimentaria materias originem trahens.

SPECIES I. *Simplex*, ex ingestis quantitate, qualitate peccantibus, aut ex corruptis in tubo alimentario, aut ex depositis in hunc ipsum stimulantibus materiis dependens.

SPEC. II. *Complicata*, cum nervosa, vel inflammatoria affectione, aut cum exanthematibus, &c. incedens.

loaded with tenacious white or yellow mucus, sometimes tasteless, and at others bitter and disagreeable. Disorders in the abdomen succeed, such as borborigmus, gripes, wandering pains, sense of weight and fulness, with either constipation, or bilious, fetid, or frothy dejections. In this stage of the affection the patient may not be so ill as to be confined to bed; but in a short time, though the cold fit be neither great nor constant, —and sometimes may be absent,—the heat, thirst, giddiness, and head-ache, increase,—the pulse becomes more frequent and often intermittent, the symptoms of the stomach—nausea and retching—and of the abdomen, are aggravated; the flushing of the face is greater, with greenish paleness towards the sides of the nose, the under lip quivers, the eyes are suffused with tears, the respiration becomes hurried and difficult, often accompanied with a cough, either with or without expectoration, pain similar to that of rheumatism is felt in the thorax, scapulae, and fauces; there is often great apparent prostration of strength, with delirium, drowsiness, or vigilia.

After three or more days, remissions occur in the morning, with a gentle sweat breaking on the forehead and breast. The tongue is sometimes more loaded with yellow mucus, and sometimes dry in the middle, and of a brown colour; the urine is made with ardent pain, is deeper yellow, or appears like that of cattle, or with a pink or furfuraceous sediment. Towards night, sometimes with a slight chilliness, or shivering, all these symptoms are aggravated; the skin becomes dry, harsh, and burning, and is sometimes suffused with a yellow tinge; blood often drops from the nostrils, mixed with yellowish serum; and the vigilia, restlessness, and delirium are exceedingly distressing.

As the disease advances, the morning remission almost disappears; the region of the liver and stomach is more tense and painful; the anxiety, heat, thirst, and head-ache, become much aggravated; the delirium is almost constant, the fauces are parched, the tongue, brown, livid, approaching to black, and covered with a viscid mucous, is almost of a fragile hardness and chopped, and the speech is impaired and stuttering. The eyes are very red, the hearing is obtuse, and the temples throb. The circulation is quickened, but the blood-vessels contracted; the urine scanty, thicker, fetid, and voided inconsciously; and the stools, liquid, brown, or greenish, and extremely fetid: while the abdomen is inflated and sounds to the touch, and the skin is parched or bathed in a viscid sweat.

If the fever in this stage is either neglected or badly treated, or the patient is otherwise in unfavourable circumstances, it will soon terminate fatally. On the other hand, if the force of the

disease is subdued either spontaneously or by art,—then the offending matters are thrown off by the bowels and skin, the remissions become longer and more distinct, the tongue more moist, and the mucus which covered it either sloughs off, or, as the tip of the tongue becomes redder, comes away from the edges in soft scales. Sometimes a very sudden change now takes place: the viscid matter almost of a ligneous hardness, which was adhering to the palate, quickly softens, and is bedewed with a bland moisture. At this period, the fever sometimes passes by almost imperceptible gradations into a periodic intermittent; or the exacerbation, becoming in its returns more tardy and mild, terminates in an equable and moist transpiration; the stools become copious, pultaceous, and natural, and the urine deposites a copious reddish white precipitate.

In the more MILD and SLOW forms of the FEVER, the patient, on rising from sleep, feels little refreshed, is listless and morose, and his mouth and fauces are loaded with phlegm; he has fetid eructations, and copious mucous expectoration, with nausea; has little relish for food, but does not altogether loathe it, though after eating he complains of weight, fulness, drowsiness, flatus and obstruction of the bowels. He has a slow, weak, and sometimes a full and rather hard pulse, with little thirst. Cold shivering is succeeded with wandering flushes, and dry squalid skin, or slight sweating; leaden heaviness of head, and murmuring and ringing in the ears, causing a degree of stupidity. The viscidity, in such cases, of the mucus in the stomach and intestines is often so great as to obstruct the orifice of the biliary duct, and give rise to jaundice. The abdomen swells, and feels painful to the touch in consequence of flatus, and of the inertia of the bowels. Singultus and difficult deglutition succeeds to great anxiety and oppression of the stomach; but in a few days numerous aphthæ are observed to spread from the fauces over the whole cavity of the mouth, which soon slough off, and are replaced with a fresh crop. Some patients are also distressed with difficulty of breathing and cough, which is first dry, and afterwards accompanied with abundant and viscid expectoration. In this state of things we can scarcely call the disease fever, unless there is greater prostration of strength, pains in the joints, increasing towards night, burning of the skin, or eruptions frequently breaking out immaturely; and more particularly if there are distinct evening exacerbations, succeeded by less distinct remissions, vertigo, vigilia, stupor, delirium, frequent syncope, with recurrent diarrhœa, rapidly undermining the powers of the system.

In other cases, great quantities of worms, sometimes living

and sometimes dead, or nearly putrid, are ejected both from the mouth and anus, accompanied with peculiar fœtor of the breath, and the usual symptoms of verminose irritation; such as wandering pains, lancinating pains of the joints, itching of the nose, meteorismus abdominis, tremor, aphonia, ptyalism, deliquium animi, vomiting, tenesmus, and copious dejections of putrid mucus.

When the attack of the fever is more sudden, we generally, though not always, observe the cold shivering to extend beyond an hour, and to recur by turns, being followed by heat, which is for the most part parching, and increased towards night, often accompanied with furious delirium. In some cases, a slight remission occurs in the morning; in others, none. The pulse is weak and indistinct, collapsing after it has at first been full and somewhat hard. There is much nausea and bitterness of the mouth, and so great tumefaction and oppression of the stomach, that the very touch and weight of the bed-clothes is painful. Towards evening, there is again an exacerbation, corresponding sometimes to semi-tertian intermittent; and the yellowness of the eyes, flushing, head-ache, vigilia, anxiety, fœtor of the breath, and delirium are increased; and the thirst, and longing for acids, is sometimes intense, but occasionally is slight. The urine, at the access of the paroxysm, is brown, thick, turbid, and fœtid; during the remission, it is watery and crude. The stools are either costive or liquid, and exceedingly offensive. Abundant but viscid perspiration gives no relief. The tongue is tremulous, and, with the teeth, is loaded with a brown viscid matter, or it is scabrous, almost black, very dry, and can scarcely be extended beyond the teeth. The stupor and vigilia increase; blood rushes copiously from the nostril, or is passed with the urine and fæces,—fluid, grumous, and preceded by pain, extending to the pubis. Now large quantities of ærugino-us and viscid bile are ejected from the stomach, agreeing in this almost with the yellow fever of America and Siam. The stools become more liquid, green, brown, frothy, and very offensive, and there is seldom power remaining either to void or to retain the natural discharges. The patient, notwithstanding, says he is very well; and attempts to go to his friends, whom he imagines are absent. He picks the bed-clothes, or mutters to himself, and sometimes bursts out into fits of furious delirium. This is succeeded by subsultus tendinum, comatose stupor, violent pulsation of the carotids, great difficulty of respiration, colliquative diarrhœa, cadaverous breath, hiccup, cold extremities; cold, profuse, and viscid sweat; very rapid, and

scarcely perceptible, intermittent pulse; lethargic sleep, convulsion, and death.

The TREATMENT which he recommends is, at the commencement, much the same with that already detailed above, under the intermittent form of the fever; though in the present instance there is more necessity for prompt measures. When there is any inflammatory complication, it must be steadily eradicated; though here we must be cautious; for in simple gastric fever, blood-letting is dangerous; but not less so than the neglect of it will be, where inflammatory symptoms are present; and these, it is to be noted, are not to be *wholly* inferred from tightness, or pricking pain in the chest, nor from a fulness of the pulse, which may, by and by, arise where there is no inflammation. The state of the bile and saburræ is to be inferred from the careful observation, and they are to be diluted and attenuated by diluent and acidulous draughts, and removed by emetics and purgatives, as above ordered. In cases of hernia, pregnancy, tender infancy, advanced age, or dread of hæmoptysis, where emetics are contra-indicated, the practitioner must cautiously weigh the several circumstances of the case, as purgatives cannot always be trusted to, and emetics are often almost the only hope of safety, and if neglected may be followed by a fatal diarrhœa. Whenever, therefore, the saburræ are evidently in the stomach or duodenum, and no inflammation of the chest or abdomen is present,—if the strength of the patient can support it,—an emetic should be promptly given. Sometimes the effect of an emetic is almost miraculous, even when very little offensive matter is evacuated, perhaps because a small matter may cause much disorder, or because the emetic acts in some way upon the abdominal nerves. Our author has seen an emetic, in a very short time, render a very dry and parched tongue soft and moist, and such a symptom, therefore, he thinks, ought not to deter us from the measure.

These indications are to be followed up with antimonials, in small divided doses, with saline draughts. Copious drink is recommended of whey, butter-milk, water with oxymel, or the expressed juice of fresh, ripe fruits. Enemata should also be repeatedly exhibited, according to the necessity. Attention must likewise frequently be given to the state of perspiration, and of the stools. The sulphuric acid is also advised, with a sufficient quantity of cold water, in order, as he says, to bridle the corruption of the bile and saburræ. So soon as evacuations cease to be indicated, the fever may often require no further treatment. During convalescence, the bark will be useful, particularly if

there is any intermittent complication, and when it is not contra-indicated by an inflammatory diathesis.

In the PITUITOUS form of the fever, in which inflammatory symptoms are rare, a similar treatment is pursued with respect to diluent and demulcent drinks, small divided doses of antimonials, and ipecacuanha with rhubarb and emetics; but acids have little effect, and are sometimes hurtful. When the bowels are unloaded of the superabundance of mucus, they are left in a very irritable state, and an incautious dose of any evacuant medicine will readily excite a fatal diarrhœa.

In the NERVOUS form of the fever it is of some importance to distinguish the cause and complications; for when it arises from contagion, as is not unusual, its malignity is greatly increased. The air, and every thing connected with the patient, must be pure, and the food such as is not liable to corrupt in the primæ viæ. Emetics of antimony, or, when diarrhœa is present, of ipecacuanha, are to be repeated, according to circumstances, and, except in a few instances, it will not be proper to promote vomiting by heat. When there is much debility, enemata of water with vinegar may be tried. In the case of pain or spasm of the abdomen, oil of almonds, olives, or castor oil, with tartar emetic diffused in it, by means of a little water and mucilage, is an excellent prescription, given in successive hours, for allaying tormina, and gently opening the bowels. It ought, however, to be well noted, that in proportion to the power or malignity of the contagion, or the prostration of strength from the disease, the incautious use of purgatives may lead to fatal consequences. The mineral acids ought also to be given with caution; for not only in the inflammatory complication, but even in great debility, our author has seen them, though well diluted, induce parching inflammation of the fauces.

When all obstruction is nearly removed by evacuants, much may be expected from the use of the BARK; though our author judiciously says, that he cannot join in the indiscriminate praise which has been bestowed upon it. In cases of debility it is useful, but is much excelled by wine and some cardiacs, when the continued fever tends not to intermittent, and the remission is evident from the pulse being softer and the urine not so high coloured; *in which case, the bark often excites great anxiety and difficulty of breathing.*

With respect to VENÆSECTION in inflammatory complications, he cautions practitioners against carrying it too far, and recommends, in doubtful cases, the pulse to be carefully watched as soon as the vein is opened, and the quantity of blood taken

to be regulated from it,—detracting more when the pulse goes on to rise. He very properly regrets his inability to give directions as to this, which will apply to all cases. In complications, however, with rheumatism, catarrh, and various exanthemata, blood-letting is indispensable; for sometimes, as soon as the operation is over, it is followed by copious vomiting of very bitter bile. But in complications again, with ophthalmia, angina, and bilious peripneumony, and in some epidemics, the incautious detraction of blood often does much injury, and induces an opinion of the malignant nature of the fever, though the mortality really may arise from the lancet. The convalescent treatment is similar to that formerly stated, care being taken in inflammatory diathesis not to push corroborant measures too far.

The practice of Frank, which we have now detailed, seems to us to be exceedingly correct and judicious, more particularly in the continued form of the fever. In the intermittent form we should prefer the measures recommended by our British practitioners, and which are too well known to require to be here detailed. As to the name which our celebrated author has made choice of, it appears to be equally good with any other, and he has been able to bring under it many varieties which are often treated of separately, though this is productive of much confusion, particularly to junior practitioners, who, fresh from the study of nosology, think every disease which occurs to them ought to have a decided character. The minute descriptions of Frank are well calculated to remove this mistake; and his tracing the changes which take place, and the peculiar treatment adapted to each, is a method much superior, because much more natural, than the neat divisions of first, second, and third stages, so often met with in books but so seldom seen in practice. The dividing and re-dividing every slight variation of disease, and treating of it under a distinct head, is, when carried to undue length, greatly to be reprobated. Barzellotti, we perceive, in his Epitome di Medicina Practica Razionale, has given particular descriptions of no less than *ninety species and varieties of fever!* and we have no doubt, that by giving a little more scope to the spirit of minute and petty re-division, he might easily have tripled the number. Frank was of opinion that he employed his time more usefully in giving his admirable practical observations, than in displaying his skill in French logic. We are sorry that we must now, for a season, part with this instructive author; for the natural desire of our readers for variety, which we must endeavour, as much as possible, to gratify, will

preclude us, for some time, from *retrospecting* any more of his admirable works. A late volume, however, of his celebrated work will soon come before us, as a new book in our Foreign department.

Court of Appeals.

"Judex damnatur cum nocens absolvitur."

Sir Gilbert Blane, Bart. *versus* The London Medical Repository and The Monthly Review.*

Honours and distinctions are always certain to create jealousy, envy, and detraction. No sooner does a man outstrip his competitors in the career of human glory, than he is pertinaciously hunted and persecuted with all the bitterness of invective, and the contumelious falsehoods of vulgar abuse. All his great and unrivalled achievements are put under the grinding scrutiny of critics, who have no idea that there can be any excellence in literature or science, except in their own paragraphs of successive defamation of all that is good and great. Their sovereign pleasure is—not to feel their minds glow and expand in tracing the acuteness, penetration, and research of exalted genius, or in contemplating the extended and glorious views which great minds have unfolded of the economy of Nature, and the wisdom and goodness of Providence:—For such they have no relish. Their sole desire is to find fault, to detract, or, in their own elegant phraseology, *to cut up*, that is, to mangle and maim, all works of high merit,—in order, as it appears, to de-

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* Elements of Medical Logic, illustrated by Practical Proofs and Examples. By Sir Gilbert Blane, Bart. F. R. S. Lond. and Edin., &c. First and second edit.

The London Medical Repository. Edited by D. Uwins, M. D. &c. Vol. xi. p. 216, where there is a review of the first edition of the Medical Logic.

The Monthly Review enlarged. Vol. xcvi., p. 425, where there is a review of the second edition of the Medical Logic.

monstrate that they—the critics—have reached so lofty a pinnacle in the temple of knowledge as to entitle them to look down with contempt on all but themselves.

We are as zealous for freedom of thought, and as hostile to the absolute supremacy of great names, as we deem to be consistent with the interests of science. We should hesitate no more to reject an error of Newton, or of John Hunter, when clearly proved to be an error, than we should hesitate to discard the fancies of Mesmer. But while we are anxious not to adopt errors on the blind faith of authority, we are equally anxious to derive from this authority all that appears useful and true, and not to bedim the splendid efforts of genius by the foul breathings of envious censure, which first misconceives, then magnifies its misconceptions, and finally discovers every beauty to be a deformity, and every excellence a fault. This, our picture, may perhaps be thought too harsh in its tone of colouring, but we are sure it is faithful; for none of the tints were derived from imagination;—several, though not all of them, were directly taken from the papers now before us, respecting the able and classical work of Sir Gilbert Blane, which, (as was to be expected if our sketch be correct,) was assailed, both on its first and second appearance, by the critical spirit of detraction, which only lives by nibbling at the faults of genius, and maintains a sort of puny consequence by assuming the strut of dignity, and endeavouring to trample on human excellence.

The first edition of the Medical Logic was given to the public as "the fruits of more than fifty years meditation and experience," by our veteran author, who, in his earlier life, had the high merit of bringing into the British navy that system of convenience, cleanliness, and ventilation, which is so valuable a safeguard of health to our seamen, and must mainly contribute to keep in vigorous activity that unrivalled courage which secures to us the sole empire of the ocean. Sir Gilbert had the gratification to see his plans successfully adopted, and to witness, as he tells us, "some of the most brilliant and important events which grace the British Annals," brought about, in some measure, by the vigour of health in our brave defenders, which he so usefully exerted himself to improve. Such were the laudable pursuits of his youth and his manhood; and though he has now become old in doing good, his desire to be useful seems to be as fresh and buoyant as when he was in the prime of his days. He not only has given to the profession the result of his experience on the important subject of medical logic, as a bequest, whose value must be highly prized, but, aged as he now is, he still goes on to investigate the treatment of diseases on

the principles laid down in that work; and, as a proof of the soundness of these, we have only to refer to his recent ingenious method of compression in certain cases of hydrocephalus,—a method which has since been tried with success by other practitioners, when all others were deemed hopeless. *(See Med. and Phys. Journ. Jan.)* We understand also, that he will very soon favour us with a large volume of Medical Dissertations, selected from his unpublished MSS., among which report speaks highly of a paper on the Diseases of London.—Such are a few strong features of his talents and professional character, by which only he is known to us; but all who do know him more intimately, mention his unassuming dignity, his humanity, and his unwearied industry in professional usefulness; and we cannot have a stronger proof of the estimation in which he is held by those who have lived and laboured with him, and who can best appreciate his merits, than the tribute lately voted to him, "as a memorial of their high esteem and admiration," by the senior physicians and surgeons of his Majesty's navy, for "*the extensive benefits derived from his professional writings*, and his zeal in promoting the interests of the officers of the Royal Navy." *(Address to Sir G. Blane.)*

Yet strange to say, this is the man in whose work on Medical Logic, it is insinuated by the Critic* who wrote the review of it in the Repository,—that "neither any definite subject nor end can be discerned." "Such works," the reviewer says, "might bear the general designation of libri Medici, according to the practice of a poor bookseller with whom he is acquainted, who, when he despairs of translating the hard title-page of some Latin or Greek author, contents himself with inscribing on it, "liber Latinus," or "liber Græcus." "We do not mean," he goes on, "to accuse Sir Gilbert Blane of having written the volume before us without a subject or an end; because his subject, or rather subjects, are interesting in their nature, and *we are able, as we imagine, to discern his end.*" Of course we must give the reviewer credit for what might, in his view of the matter, be called the power of impossible penetration. The result of the operation of this miraculous faculty is, that Sir Gilbert unfairly allured him with a flash title-page, and to prevent others from being similarly deceived with it, he "*cannot help* signifying" (so headstrong is his passion for cri-

* It has been hinted to us that the Editor may not perhaps have been the author of this illiberal review; but whether he wrote it or not, he is clearly responsible for whatever appeared in the Repository while he was its acknowledged conductor.

ticising) "that it is *not* a work on the Elements of Medical Logic." In other words, the critic thinks that though Sir Gilbert took up some interesting subjects, yet when the work was finished he did not know all the while what he had been writing about, and, in despair of ever knowing this, called the book, at a venture, "Elements of Medical Logic." Sir Gilbert, therefore, being quite ignorant what Medical Logic is, his obliging reviewer proposes, with great kindness, to instruct him in its 'nature and importance at the close of his review.' On turning, however, "to the close of the review," we find that his promise is not fulfilled, for, without ever thinking of it, he 'imperceptibly *extended his limits* so far, that he left no room for the few closing remarks which he had intended to offer,' and he finds it much easier, in lieu of these remarks, to repeat that Sir Gilbert's "work is *not* on the elements of Medical Logic." Accordingly, we are still left by the critic without remorse, in the dark and uninstructed, as we cannot learn that he ever redeemed his pledge in any succeeding number of the Repository, or elsewhere. His ability to do so must therefore remain *inter dubia;* but as some consolation to his readers for the want of his "opinion at large" on the nature of medical logic, he refers to a paper on medical evidence, by Dr. George Fordyce, "whose penetrating mind, precision of language, and philosophical habits of viewing every question, would have admirably adapted him to treat the whole subject with all the method and comprehensiveness it requires;"—and of course we are left to infer, that the want of all these qualifications in Sir Gilbert Blane has made the critic "sorry to meet with such matter under such a title."

After these instances of fairness and candour we were not surprised at many of the blundering criticisms which abound in the review. Sir Gilbert, for example, says, with all the modesty of true genius, "that it is his intention, with unfeigned diffidence and humility, to endeavour to point out in what MEDICAL TRUTH consists, and what are the difficulties that have obstructed its progress, and what the means of obviating them." But the critic having apparently formed some vague notion of Medical Truth existing in space, like a mythological goddess, separate altogether from facts and reasoning, regrets that Sir Gilbert's "good intention of endeavouring to point out in what medical truth consists, is abandoned in the course of the work," being "noticed in no other passage." To us, Sir Gilbert's whole work, and we may say the same of every well-intentioned medical work, appears to be nothing but an inquiry into the nature of medical truth, that is, *an examination into the truth*

of facts, and of the inferences to be fairly and philosophically derived from them. As to *A Something* called Medical Truth, apart and away from facts and reasoning, we confess we know nothing, though the critic seems to have had his "optics dazzled" with some such shadowy vision. Sir Gilbert Blane was aware that the following of the phantom, thus dignified with the title of Medical Truth, would have been as foolish and as idle as searching for the universal medicine, and he accordingly, with much judgment, confines himself to the inquiry into the truth of plain facts and useful reasoning.

Sir Gilbert, after being thus accused of not knowing what he was writing about, and of abandoning his good intentions concerning medical truth, is next arraigned for *indolence.* We should have thought that this, of all others, was the most unlikely charge which could have been alleged against our venerable author, whose whole life has been one uniform display of uncommon activity and industry.* The charge is founded upon a reference which our author makes to his lecture on muscular motion, read before the Royal Society. The reviewer thinks that the remarks taken from this lecture, "have been forced from their former situation, *for no other reason than to save the labour of meditating* a more appropriate introduction to the arrangement before which they stand;" for "it is certain they can have no connection which he can discover, either with any other subject treated in the book, or with the arrangement itself;" besides, it is alleged, that the remarks themselves will not be found easy of comprehension."—The illiberal and unhandsome imputation contained in this charge requires no stigma from us to mark its motive.

We have not patience to follow our critic through his labyrinth of censure and of praise; his great forbearance in not objecting "out of courtesy" to Sir Gilbert, so strongly as he was inclined! his feeling no obligation to him for his arguments, which are so obvious as not to require repetition, nor for the triteness of his examples, which have been "selected again and again, and with the same object;" his discovery of singular paradoxes, &c. We must pass on to encounter another enemy of the venerable baronet's.

The critic in the Monthly Review, who assails the second edition of the Medical Logic, opens most consistently with praising the "meritorious exertions made in the work in order,

* We understand that Sir Gilbert has had the perseverance to teach himself German, and other modern languages, during his professional rides in his carriage—another strong proof of his industry.

perhaps, to gain a favourable hearing; but soon discovers that the author has treated the subject which Cabanis expounded so admirably and satisfactorily. "in a mere cursory manner;" and though he has "introduced a variety of interesting matter," the critic does not think "it will add materially to Sir Gilbert's reputation." He calls our author, able, worthy, respectable, and meritorious, but accuses him of want of learning, ingenuity, and originality, and of not being free from "groundless hypothetical reasoning." As another instance of the critic's consistency, he first denies Sir Gilbert's position, that speculative opinions in medicine are productive of injurious consequences; but in a few sentences after admits, that "the hypothesis of BROWN,—*the work of a man wholly devoid of experience in medicine!*—did lead to practical errors of a most injurious character."

The monthly critic also charges Sir Gilbert with interlarding his pages "with school-boy quotations of the most trite passages from the Latin poets." To us, however, these are strong evidences of the classical taste which our author has so successfully cultivated amidst all the inconvenient bustle of his professional life; and even if they were nothing more than school-boy recollections, there is something so pleasing in seeing a venerable scholar thus looking back with delight to the summer flowers of his boyish studies, that nothing but the illiberality and ill-nature of criticism could find fault with it. This critic also talks of Sir Gilbert's "idle gratification of self-love," and his "delusive conviction" that he knows what he does not know; —but our readers, we are persuaded, have had enough of this illiberal vituperation. We cannot now spare time to defend our author against the charges of "inaccuracy," and of using "loose analogies," brought against him by our able brother journalist, Dr. Johnson; though, by the way, this is rather beyond that respectable reviewer's proverbial sparingness of censure and suavity of phrase.

In conclusion, we are far from thinking that Sir Gilbert Blane has written an immaculate or a perfect work. This, no human being ever did, or can do. Lord Bacon's celebrated Novum Organum, the basis of modern logic, is far from being perfect or complete; yet is it, with all its faults, valuable; as, with all its faults, the Medical Logic is valuable;—and we should never censure a critic for pointing out faults and correcting errors, if this were done with the pure feeling of doing the author or the public good by the criticism. With such criticism the author himself would be pleased; but when the base spirit of censure, and, to speak medically, the *diathesis* of "cutting up" seems to

predominate in a reviewer's mind, we think the author is ill used, however gross, or however numerous may be his errors. We cannot conclude better than with a profound remark of a French author: "Lorsqu'on s'obstine à détracter quelqu'un, c'est au moins aussi souvent par excès d'estime que par le sentiment opposé."

British Review.

Dr. Barclay and Mr. Lawrence on the Nature of Life, Spirit, Matter, and Organization.*

This is as much a practical and useful subject, in one point of view, as the treatment of fever or phthisis; though, in another, it is only a speculation of curiosity. We speak not in paradox nor on supposition, in calling it practically useful; for we believe there are few practitioners in the empire who have not, since the publication of Mr. Lawrence's book, been consulted as seriously concerning its doctrines, as they have concerning diseases. It is, in fact, considered a professional subject, with which some acquaintance is deemed indispensable; and now when knowledge and science are spreading rapidly among all ranks, both the physician, the surgeon, and the apothecary, must endeavour to keep some pace with the diffusion of information, or the profession, instead of being, as hitherto, esteemed learned, will come to be looked upon as a mere trade in prescriptions, operations, and medicines. We do not mean to say, indeed, that professional skill will be estimated wholly by the knowledge possessed of the theories of life, or of any other theory or discussion; but we are certain that some acquaintance with these theories of life, now considered a professional subject, will be taken as a leading test of a man's knowledge and learning, in his intercourse with society; and this is clearly of the greatest moment in acquiring a superior character for talent. We may apply the same observation still more pointedly to the intercourse of professional men with one another. *Nothing gives an individual more decided weight and*

* An inquiry into the opinions, ancient and modern, concerning Life and Organization, by John Barclay, M. D. &c. &c. Edinburgh, 8vo. 1822.

Lectures on Physiology, Zoology, and the Natural History of Man, delivered at the Royal College of Surgeons, by Wm. Lawrence, F. R. S. &c. &c. 8vo. 1822.

influence among his brethren, than superiority of knowledge and acquirement, both on common subjects, and on those which, like the present, are not indispensable in the maintaining of titles, and therefore not generally made the object of study, This is surely worthy of consideration ; and even if it were for nothing more than the enlargement of the mind, which every new inquiry produces, giving a loftier station and a wider range of intellectual power at every step—it ought not to be neglected. Those who confine themselves to a single study, under the idea that the keeping exclusively to one thing is the only road to superiority, are grossly mistaken ; for by this method they will as infallibly narrow their range of thought, and cramp the powers of the mind, as the Hindoo Fakir cramps his power of moving by continuing motionless in one spot for a series of years.

We are prepared to hear the following views called superficial and flippant, by those who fancy all that is unintelligible to be profound, and all that is plain to be superficial. Our maxim is, that no philosophy is profound but what is plain and easily understood. We may be allowed, perhaps, to quote our Saviour as the highest possible example that *plainness is profundity ;* and if this great example be denied us, we quote Solomon, Socrates, Lord Bacon, and Newton. We care not then for the imputation of superficialness and flippancy, from those who relish nothing but mystery, which they themselves do not and cannot understand. We shall, on the contrary, triumph to hear the accusation, as it will be the strongest evidence of our successful endeavours to be plain ; and we cheerfully leave those to mince their mysteries *who have nothing better to advance.*

We shall try, as far as we can, to remove the great objection which is made to the study of the question concerning life, arising from the difficulty of comprehending it ; the discussion on all sides being so obscured by a cloud of misty and meaningless words, and even common words being used by the theorists in so uncommon significations, that a plain rational man finds the several arguments altogether unintelligible, and gives up their perusal in disgust. The spell of mystery which was thrown over these inquiries by Aristotle, Plato, and the Schoolmen of the dark ages, though much weakened, is still undissolved, and continues, and apparently will continue, to shackle philosophy in all her more recondite researches ;—in none more so than in the subject under review. We do not, indeed, pretend to have completely escaped from the thraldom of these Greek mysteries ourselves,—for the influence of school-boy impressions remains so tenaciously, that even when we are

most determined to discard our prejudices, and are fully aware of their injurious existence, they still cling to us in spite of our efforts, and, under some change of form, or of expression, mingle with all our observations, and all our reasonings. We have a strong example of this in all the late works concerning life, and in none more so than in the works of Mr. Lawrence, and his French masters, Bichat and Cuvier, who, though keenly pre-determined to pull down mystery, and keep closely to fact, have, we may boldly say, frequently failed in finding their way out of the misty cloud of words in which, at the commencement of their inquiry, they found themselves involved. They have the consolation, however, that they are not the only celebrated philosophers who have lost their way in the same mist.

We are told, in every book of controversy, that DEFINITION is the only way of settling the meaning of disputed terms. But, though we allow that definition, or rather description, is often useful, we seldom, if ever, find it so in controversy; for no sooner is a definition propounded in order to settle a dispute, than a fresh controversy, in almost every instance, arises about the definition, and the war of words rages as violently as if the peace-making definition had never been chosen arbiter. The pride of human nature is not very willing to confess it, but it is not the less true,—that the imperfection of our minds is the source of all this ignorant wrangling. Being fully aware of this imperfection, we have not the presumption to expect that we can settle the dispute before us; but we have the hardihood to think (though, after all, we may be wrong), that we can point to the origin of many of the errors which our authors have fallen into; and if we can do this, there will be one great point gained, for the unlearning of error is one of the highways to truth, in which we all ought to travel assiduously.

There is one rule, which, if our system-makers had observed, they would have, we are convinced, saved themselves a great deal of unnecessary blundering:—*Examining carefully whether their notions or ideas strictly agreed with observed facts and the inferences drawn from them; or whether they have, in some cases, any idea at all, attached to the words and phrases which they employ.* If we try by this rule, the greater number of the assertions made concerning life, and matter, and organization, we shall find, for the most part, a series of words standing as names for things which have no existence, and a multiplicity of phrases which express no fact. Yet, wonderful to say, many of those baseless systems have all the air of consistency and sound reasoning. The secret of this consistency lies in assuming the premises, and arguing closely and correctly from them. Grant

a philosopher, Mr. Herapath for example, a goodly array of premises,—false, true, or visionary, no matter which, and he will build you a magnificent system of deduction and argument, all mathematically true and irrefragable. But, on the other hand, scrutinize the premises of any of our systems, and reject what you cannot find proved, and we venture to say, that few of them will stand before such a test.

We shall exemplify our position by thus examining the basis of the works under review, which have all been reared upon two terms, MATTER and SPIRIT,—terms which, so far as we can understand them, are names for nothing. We flatly and fearlessly deny the existence of a certain thing which is called matter, and another certain thing which is called spirit, and we call for the proof of their existence, from those who use the names, and who talk about what we affirm to be non-entities. In making this denial (and we shall immediately give reasons for it), *we pointedly disclaim any opposition to the sacred doctrines of Christianity, and all connection with the fanciful opinions of Pyrrho, or of Bishop Berkley, or of Hume,* who all reasoned, from their premises ingeniously enough, but who were, as we think, allured from the observations of plain facts, by some fancy concerning a link or chain or the want of this, between mind and matter: which visionary link, by the way, has drawn the greater number of inquirers on this subject completely out of their depth.

Let us hear the proofs for the existence of this something called MATTER. These consist wholly in a series of assertions such as,—matter is hard, impenetrable, divisible, colourless, and has length, breadth, and thickness, or, in other words, is extended. Now all this may do very well as a Linnæan enumeration of qualities; but the question recurs, where is this matter to be met with or procured? We wish to have a specimen of it to identify the hardness and the extension, but we cannot find one. We know that a piece of iron or a piece of wood is hard and extended, and these are said to be material, or *made of matter*, that is, the iron and the wood are not matter but made from it, and the matter is something as different from the iron and the wood as the kernel of a nut is different from its shell, and like the kernel too the matter is within the iron and the wood, and forms the base upon which their hardness and extension are propped; it is the substance, *standing under* and supporting the extension, and the hardness, and the divisibility. We are also told that neither the hardness, nor the divisibility, nor the extension, make any part of matter itself, or what is called the ESSENCE OF MATTER; for these are merely the shell to another kernel, and this second kernel is the

genuine essence of matter,—which is said to compose all things in the universe except spirits, and though it is the support of qualities it is no quality itself. What is the most wonderful thing connected with the discussion is, that most of the theorists fairly confess, that they do not know any thing concerning this other something called *essence*. For a philosopher to confess ignorance, though Socrates and Franklin did so, is a very rare occurrence. But is it not very singular how the existence of this non-descript thing called essence came to be known at all, when none of its properties are known? Is the essence of matter, we ask, hard, soft, red, or green? Nobody can tell—and yet all agree that it exists. Who has seen it or felt it?—nobody.—Until it be satisfactorily proved then, we flatly deny the existence of this essence of matter.

This we believe to be a very fair account of the nature of the something or nothing called matter, and of the proofs of its existence. Our account is short, indeed, and homely, but it is, so far as we understand the theorists, accurate. Now as we have never been able to discover any portion of this something called matter in wood, stone, metal, or any other thing, and have never learned that any body has seen it, we refuse, and with justice we think, to believe in its existence till it be proved upon the evidence of some credible witness. At the same time, we refuse not to say iron and wood are made of matter; for we have no more objection to use the language of the theory which has now indelibly incorporated itself with common language, than we have to say the sun rises and sets, though we know all the while he is stationary. But we object both in the case of matter and of the sun, to use this inaccurate language in those philosophic discussions, in which it may lead to error. There does not then seem to be any such thing as this matter; for iron, and wood, and stone, are as markedly different in their qualities as blood, bone, and muscle. To us the whole appears to be a philosophical fancy, quite unproved and highly improbable. We abide by the evidence of our senses, and when these lead us into errors, as they sometimes do, we trust to the evidence of the inferences deduced by reason and reflection, from what we observe by our senses. Adhering, therefore, rigidly to such evidence, and we know of no other except that from testimony, we find the existence of matter to be a mere supposition. After this plain statement, we think we shall scarcely be accused of absurdly denying, with Hume, the existence of the external world; though it is very probable, that misconception will so represent our views. We have given no theory. We have kept to facts, and when it

shall be shewn us that we are in error, we shall instantly and cheerfully renounce it.

The proofs of the EXISTENCE OF SPIRIT are, if possible, still more feeble and visionary than those for the existence of matter. SPIRIT is said to have no parts, and of course to be incapable of being divided. It is said to have no length, breadth, or thickness, and to have no existence in place; it is not, therefore, like matter, impenetrable. Spirit then can have no colour, no form, no smell, no taste; and it cannot be either hard or soft. That is, it has no this, and no that;—it is a mere negation or denial of every quality of matter. The only positive property allowed to spirit is that of thought or thinking. Now, at the very outset, we ask your profound philosopher, who squares his brow, and looks wise and solemn when he makes these announcements,—where or how he obtained all this deep and useful knowledge of the nature of spirit? He deigns us no answer; but calls us sceptics, materialists, and heretics, for refusing to bow to his oracular authority. We are therefore left to put up either with his catalogue of nothings or remain in our former ignorance; though, after all, we believe our ignorance to be much on a par with his pretended knowledge. From these barefaced assumptions have probably sprung all the errors and absurdities of materialism. It may be said the assumptions are probable; but we can most easily shew that their contraries are still more probable. It is said, for example, that spirit exists not in place. Where then, we ask, does it exist? We cannot conceive of any thing existing, and at the same time existing nowhere; if the theorist says he can conceive this, we plainly tell him we cannot reason with him, as we can only reason from our own conceptions, and these would lead us unequivocally to affirm, that if spirit do exist at all, it must exist in place. We go farther, and maintain that if it exist in some place, it must fill up a certain portion of that place—small or great is not the point—but it must fill up the place where it exists. We think there is no resisting this conclusion. But if it fill up the smallest conceivable place, it must have length, breadth, and thickness; for the ten thousandth part of a grain of sand has dimensions, and if you divide this into one million parts more, each part will have length, breadth, and thickness, and fill that portion of space in which it exists; and so must what is called spirit. From the same premises, we infer that spirit may be divided; for if it has length, that length may be reduced to less, that is, it has parts and is divisible.

It is well we have revelation to trust to for proof of the immortality of our souls; for the much-boasted argument for

the soul's immortality, drawn from the assumed non-extension and indestructibility of spirit, *(Baxter, Drew, &c.)* must now, we think, be abandoned, along with the far-fetched and inconclusive doctrines of Plato, as well as the more recent argument taken from the notoriously false assumption of the progressive improvement of man from infancy to old age. There never has been, indeed, to our knowledge, any rational argument brought to prove the soul's immortality; and for us to trust to Plato, or to hunt after such argument, is to renounce or to oppose the scripture declaration, that "life and immortality were brought to light by the Gospel." Yet it is one of the heaviest charges brought against Mr. Lawrence, that he has made a similar statement. Those who accuse him of this on a religious score, must certainly be very ignorant of the religion which they profess, when they would prefer the very inconclusive arguments of Plato, or Cicero, or Baxter, or Addison, or Drew, to the plain announcement of the Bible, on which announcement alone we can ground any hope for our future existence.

Having thus disposed of the qualities which spirit does not possess, and found that from this evidence at least, spirit can have no existence,—we must now examine whether thought and thinking, the assumed essence of spirit, give it any better right to a station in the universe. We say that this is an assumption, in so far as thinking cannot be proved to belong to any being except man, and even the theorists will not admit man to be *spirit* any more than they will admit iron to be matter. God is said to be a spirit; and angels are said to be spirits. But where is the proof that God, as a spirit, *thinks*, or that angels, as spirits, have thought. All human thinking consists in perceiving, remembering, judging, and feeling; but we dare affirm no such thing of God, nor of angels; neither dare we affirm the contrary. Yet here do our theorists most daringly assume that because they think themselves, and because this thinking is assumed to be the essence of spirit—therefore God, as a spirit, also thinks. This is certainly going out of their depth into the empty and pathless void. Independent of God, man, and angels, there may be, for aught that can be shewn to the contrary, millions of spirits in the universe which think no more than a stone thinks; but the theory is absolute and peremptory, that thinking is the essence of spirit.

We have already proved *essence*, in this sense, to be a mere phantom, and if our arguments be examined, (we hope they are at least intelligible,) the *spirit* of the theories will appear equally unreal. For it is to be remarked, that thinking is not said to be spirit, but the essence, or a quality of spirit. It is

the old story of the kernel and the shell of the nut. Thinking is the shell, and spirit is the kernel; but nobody has ever seen or felt this kernel, and can say nothing about it but that they are sure it is in the nut, if it were once broken. We demur to this; for the nut may be empty, and we have as good a right to maintain this, as the theorists have to maintain the contrary; that is, we have no right at all to affirm any thing of this kernel, or phantom called spirit, till we have good evidence to support our affirmations.

But while we reject the theoretical thing called spirit, we can affirm, on the highest authority of testimony, that God is a spirit, and that the soul of man is a spirit, and that these two orders of spirits have attributes peculiar to themselves in the same way as upon the evidence of our senses and of reflection we can affirm that iron is hard and water fluid, while we reject the existence of the phantom called matter. Our Saviours's account is, that "a spirit hath not flesh and bones, as you see me have;" and this is the best answer which can be given to those who puzzle themselves and others with idle and abstruse speculation about the essence of spirit and the essence of matter. It shews very gross ignorance in the religious persecutors of Mr. Lawrence to object to what he says on these points; if his language, indeed, did not, in some places, bear a strong ironical construction,—nothing can be more just,—nothing can more strongly support Christianity than his remark, that we are indebted to the testimony of revelation alone for almost all we know about the spirit of God, and the spirit of man, and but for revelation he justly thinks we m ght never have surmised the existence of either. The opponents of Mr. Lawrence, though they must feel the force of this, are exceedingly loath to agree to it. Their pride of heart will not allow them to confess themselves indebted to the Bible for their knowledge. It is not, indeed, so much for attacking religious opinion, that the cry of persecution *(in this case at least)* is raised against him, as for pulling down the strong holds of human pride and self-sufficient dogmatism. We would ask those proud persecutors, who dictate so tyrannically to others, what they imagine revelation was intended for, if not, *as in this case*, to enlighten mankind on subjects which were beyond the unassisted powers of reason to discover, and which foiled all the learning of Egypt, Greece, and Rome?—*We beg that these our remarks be applied only to the doctrines of the spirit of God and of man, and to the soul's immortality.* We cannot, and we are sorry for it, speak so favourably of many of Mr. Lawrence's other doctrines, nor of his irony and

jeering. These are every way out of place in the lectures, and detract much from the force of his reasoning.

The theorists go on with their series of assumptions and say, unconditionally, that all things in the universe are either matter or spirit,—are either passive or active. Now granting them, for a moment, that the things which they call *matter* and *spirit* do exist, how do they discover or prove, even from their own shewing, that *all* things are either the one or the other? May there not be ten thousand, and ten thousand more beings in the universe, all different the one from the other, and not one of the whole possessing one of the properties which they ascribe to *their* matter and *their* spirit? This is, at least, conceivable and highly probable. We ask, for example, whether light be matter or spirit? Our theorists are puzzled at the question; but unwilling, as they always are to confess ignorance, one says it is material, and composed of particles which have no momentum, but which can easily and rapidly penetrate the hardest known substance, the diamond; another justly concluding this to be unproved and absurd, affirms that light is nothing but a peculiar motion of he knows not what. The same nonsense is affirmed concerning heat.—We ask again, whether electricity and magnetism are matter or spirit? And the fancy of the theorists being thus again prompted to say at least something on the subject, one tells us his tale about certain auræ or gas of inconceivable tenuity, and another talks as undoubtingly of the electric and magnetic fluids as if he had specimens of them bottled up in his cabinet. We should like extremely to hear the theoretical proof of the fluidity of electricity or of magnetism; it must be exceedingly amusing. We are certain that, so far as we know, they have none of the properties of water, oil, and other fluids; and we do not see that any object of utility is gained by talking of a fluid *sui generis*. The *sui generis*, to be sure, is an excellent screen for ignorance, and is always had recourse to in puzzling cases; for a theorist would much rather say "*sui generis*," than "I do not know."

We think also that we are entitled to ask whether gravity, space, and time, are matter or spirit? Our theorists will not pretend to say that these do not exist; and according to them every thing that exists is matter or spirit;—whether then is time to be ranked with matter or with spirit? Whether is space matter or spirit? Whether is it active or passive? The theorist answers not, for he will not abandon his theory, and so long as he abides by it, he cannot answer. It is a mere evasion, to say that space is nothing but distance. This evasion

will not apply to time; and we ask whether time is active or passive?

We venture with diffidence upon another illustration. We know, though very imperfectly, a number of the attributes of God, such as his goodness, his wisdom, his providence; but is it not highly probable (for ourselves we have no doubt, though we cannot prove) that God possesses numberless attributes of which we never heard at all,—which we could not understand if we did hear of them,—and which, besides, might be of no use whatever for us to know. If it had been necessary for us, they would undoubtedly have been revealed to us in the Bible. Is not the very same highly probable of numberless beings in the universe? We know not one millionth part of the properties of our own bodies, or of the changes going on in them; and in numberless cases,—we might say, perhaps, in all,—we cannot tell whether the operations and changes taking place among the solids and fluids of our bodies are to be referred to an active or a passive state, or, in the absurd language of the theorists, whether they are to be referred to *matter* or to *spirit*. We take an example. The great difference of the bones, the muscles, the blood, the skin, the hair, &c. in infancy, youth, manhood, and old age, are obvious and remarkable to all. Now, we ask the physiologist who advocates the fanciful doctrine of matter and spirit, by which of the two, the passive or the active agent, is this change from infancy to age effected? We must be answered, or we must renounce both his matter and his spirit. To fly off into unintelligibles, and tell us that it is by the course of nature,—by the gradual drying and shrivelling of the solids—the contraction and obliteration of the capillaries, and the like, will not do. He must tell us whether it is matter or spirit which has been the operator, and if he say both, he must assign to each their proper share of the task. The advocate of matter and spirit is in this case completely non-plussed. He recognises no other thing in the universe but these two—the passive matter and the active spirit, and of course he cannot fail of being puzzled at every step which he takes among the works of God.

We ask him whether it is matter or spirit which makes a stone fall to the earth; which makes the earth revolve in her orbit; which makes plants grow; which makes dead bodies putrify? He again goes off to his magazine of unmeaning words, and tells us it is by the laws of Nature, or (if he is a pious, religious man) by the laws of God that all these are effected. But he must not be suffered to escape thus; and we ask him whether this law of God or of Nature is matter or

spirit? Whether it is active or passive? Does God himself put it in immediate execution, or is it *a something* which acts by its own powers and by its own intelligence? To a theorist who talks fluently of Nature, and the laws of Nature, we put the question—what is Nature?—is it matter or spirit?—active or passive? He is silent. He has been questioned into a dilemma.

The advocate of materialism, upon perceiving the dilemma into which these questions have put the matter and spirit theorist, may probably fancy that we have been strongly corroborating his peculiar views. He is much mistaken. We are as far from being materialists as from being abettors of the untrue, because unproved, doctrine of matter and spirit; and we put precisely the same question to the man who can discover nothing in the universe but matter. We ask him if time or gravity is matter? If life is matter? If heat is matter? and if God is matter? He has also, as well as the other, his magazine of words and arguments; and he tells us, that all these must be material, even from the very language which we use in speaking of them, which is all material; and he refers us to Horne Tooke and his followers for numerous examples of his position. A very complete answer to this doctrine will be found in our preceding number, (page 98.)

We take the materialist on his own ground. We allow the fact, that all the language which we use concerning God and concerning the soul of man is material; but we deny that it is directly so, for it is uniformly employed metaphorically, and by figure. The more strongly we speak, indeed, concerning God, the more material become our figures and our metaphors. We say that God *rides* on the whirlwind; that he measures the sea in the *hollow of his hand;* that he *makes bare his arm* against the wicked. All which are clearly metaphors, derived from human nature. We even say that God is *angry* with the wicked; that iniquity *grieves* his spirit; that he *loves* the good; that he *hates* sin; that his *wrath* is upon the children of disobedience; all which are clearly metaphors taken from the passions of men;—but this is as far from proving that God is influenced by wrath, hatred, grief, and other human passions as that he is fashioned like a man, with a human body and human members. In the same figurative way St. Paul speaks of *a spiritual body:* if the expression be literally taken, it is inconceivable; as a metaphor, it is easily understood. Every body knows how greatly Milton failed, in trying to reconcile our notions of spirit with our notions of body. We give one extract. In speaking on the attack on Satan by Michael, he says, his sword

——— deep entering, shar'd
All his right side: ——— ———
The griding sword with discontinuous wound
Pass'd through him; but the *ethereal substance clos'd*
Not long divisible; and from the gash
A stream of nectarous humour issuing flow'd
Sanguine, such as celestial spirits may bleed.

Paradise Lost, VI. 335.

The truth is, that we must use this material language in speaking of God, and of the soul, for we can understand no other; and if it had been necessary for the purposes of religion to employ any other language—it would have been used in the Bible. But there is not, in any part of the sacred volume, any other language applied to God which is conceiveable by the human mind. When we are told that God is infinite, and eternal, and a spirit, our mind is not equal to the conception of these: we are overpowered with awe in the contemplation, and obliged to have recourse to metaphors of space, stretching away and away and away, to express infinity; of time running onward and onward, without a pause, to express eternity; and of a thin and invisible gas, or air, or vapour, to express spirit. Such are mere self-deceptions, however; mere apologies for ignorance,—for we cannot comprehend it—"it is too high for us." As an instance of the absurdity into which the greatest men fall, when thinking of these subjects, we may mention the profound and philosophical Pascal's conception of God's omnipresence. "Conceive," says he, "a point moving through the universe with such infinite swiftness, that it is in every place at the same instant of time,—and you will understand the manner in which I conceive of the omnipresence of God"!! *(Pascal, Pensées.)*

The materialist, we conclude, loses more than he gains by referring to the materiality of the language applied to God and to the soul. It is this very materiality of language which proves most strongly that God and the soul of man are something very different from what he calls matter. In his way of reasoning we could prove that dew-drops are pearls; that the eyes of a beautiful woman are celestial stars, and her neck a piece of ivory or marble; that summer fields laugh and rejoice; that willows weep for grief; and that the "hills clap their hands" for joy, —because such language is metaphorically used. The same sort of argument which is brought to prove that the soul is a sort of material gas, or vapour, or whatever it may be called, will prove that a weeping willow has eyes and sheds tears. *To*

say that we cannot form a conception of a soul which is not material, that is, which cannot be seen or felt, is not to prove that the soul must be material, but to prove that our conception is limited to what is material.

We have still another view of the matter to take,—that namely, which is advanced by Bichat, Blumenbach, Cuvier, and Lawrence, who tell us that life is organization, or organism, or, in a word, is only the action of the organs of the body. This may explain some facts, but it will not carry us far; for, granting that there is nothing in the body but organs or instruments for digestion, circulation, or secretion, we ask whether perception is a secreted substance? and if memory or judgment are secretions? No, say the theorists, but they are "vital manifestations," or vital functions, like the functions of digestion, circulation, respiration, and absorption. *Perceiving* then, appears from this to be a kind of *eating of ideas*, and memory and judgment a kind of digestion and assimilation of these ideas; and such, it is to be remarked, are precisely the corporeal metaphors which, even by the vulgar, are applied to these mental operations. Mr. Lawrence and his masters, however, seem to waver and vacillate from one opinion to another, or rather from one phrase to another, with great inconstancy; and Dr. Barclay, with his clear penetration and his pointed and pithy logic, keeps closely by them in their most intricate doublings, and points sarcastically to the nothings which they try to conceal under a gaudy veil of verbiage, but which the keen anatomist lays bare by a single stroke of his scalpel. He will not be put off by words; he must see what is behind the words. At one time, Mr. Lawrence scruples not to ridicule those who suppose an internal principle that puts the body in motion, representing it as a "metaphysical chimæra," "whose office at best is no better than a sinecure." His notion in one place is, that if life is not identical with organization, it is identical with breath, *(spiritus a spiro* and *pneuma a pneo)*,—'the origin of all verbal sophistry and metaphysical puzzles about spirit.' Yet Mr. Lawrence, in another place, forgets altogether, his ridicule of the internal principle, and says, that bodies "grow by an *internal principle* and finally perish by that *internal principle*, or by the effect of *life* itself." (p. 145-7.) Now we ask Mr. Lawrence, (and the question is but fair), what in this sense is a *principle?* Is it something that may be brought under the cognizance of the senses? We confess we cannot understand his meaning till we are answered. And we ask also what he means by *life*, which he says is the cause of death, though in other parts he says life is the cause of life? Cuvier says the same,

"La vie ne nait que de la vie;" and though like Mr. Lawrence he often ridicules the internal principle supposed by the vulgar, yet he slips into this same vulgarity himself, and minces something about "un principe intérieur," which to us, however, is from his description of it, quite unintelligible. (CUVIER *Leçons d'Anat. Comp.* I. 19.) M. Cuvier and Mr. Lawrence also both agree in talking of something which they call a LINK, or force, or vital germ, which holds the functions or the organizations, or the life together, but they seem to have no more idea of it than their opponents have of spirit; and till they condescend to picture or describe intelligibly their idea of this link or vital impulse, or connection of the functions of organization,—they must be content to rank among chimerical metaphysicians. To us their terms convey no idea whatever on the subject of life, their links, and germs, and impulses, are all as unmeaning, in the way which they use them, as spirit and matter are unmeaning.

To follow them through all their attempted explanations of what appears, at least to us, to be inexplicable by man, would lead us over the same ground, which we have already traversed of exposing the emptiness of words expressive of no idea. But before we leave Mr. Lawrence, we must take the liberty of cautioning him not to venture out of his depth. He tells us, that the mind is "annihilated by death." This is certainly not keeping, as he promises, to the facts, but going beyond them. For how can he tell us any thing about the mind at death, either as to its existence or its annihilation, when *he cannot, as we have seen, give us any intelligible account of it during life?* If he had fairly confessed his ignorance of the nature of the change which happens to the mind at death—this would have been keeping to the facts, in so far as scripture testimony is not concerned. If his sentiments have any meaning at all, it must be that Mr. Lawrence cannot, by sensible investigation, trace the existence of the mind beyond death. This, however, is only an expression of Mr. Lawrence's incapacity to trace, and has nothing to do with the existence of the mind: for on his own principle of keeping to the facts so far as they are known to him, *he is not authorised from observation or experience, to say a word either for or against the existence of the mind after death;* as the powers of man are altogether inadequate to such investigation. But instead of keeping to the facts, Mr. Lawrence in this makes a mere assertion, which, *independent of scripture testimony* can neither be proved nor disproved, and is good for nothing.

Mystical and unintelligible, as we think Mr. Lawrence's doctrines concerning life are, (though, strange to say, he is no less

a professed enemy to mystery than ourselves), we think, that he is not more so than most of his opponents. Among these, we are extremely sorry to see Mr. Abernethy, who, out of a strong feeling against what he conceived to be the errors of materialism, has ventured upon opinions, which have, we are bold to say, more of the worst features of materialism, than those of Mr. Lawrence. Mr. Abernethy shelters himself, indeed, under the great name of Hunter; but the authority of no name, however great, will make us subscribe to an opinion, which goes near to identify life with some *sui generis* play of chemico-electric agency. If Mr. Abernethy has a *clear* notion of his own doctrine and his own terms, we give him credit for a more powerful conception than we can form any idea of. So far as his doctrines are intelligible to us, they are as gross materialism as we have ever met with; yet is it on this very charge of materialism, that Mr. Abernethy has so severely attacked Mr. Lawrence. Such is the weakness—such the consistency of human nature! and so it usually fares with us, when we daringly venture to expound subjects which are altogether beyond the reach of human research.

Were we asked what theory we adopt,—we should at once answer—none. *What* then is life? We answer that we do not know the meaning of this *what*. Is it not enough for us to know the phenomena of living bodies; to know, that while life continues, food is digested and formed into blood, which repairs the worn materials of the body;—to know, that when any object is offered to the senses, or any idea remembered, we must pronounce judgment upon it, whether we will or not, and must also remember that judgment, whether we will or not? If we are still asked, *What* is it in us that perceives, and remembers, and judges? we again say, that we understand not the *what*; and so far as we have looked into the discussions on the subject, nobody seems to know anything of this *what*; nor to know the thing which they are inquiring about in their researches after the *what*. If, in answer to the *what*, we are told it is spirit, soul, mind,—does this make us one jot the wiser? If we are answered, that the *what* is matter or organism, or vital functions, we should like to know the utility of such an answer; for it seems not to carry with it any idea or any information. The only rational way of managing the subject is to give up at once the useless research after this visionary *what*, and keep to the observation and the record of the facts, and the inferences derived from them, relating to the digestion, assimilation, secretion, excretion, and animal heat; and to sensation, passion,

memory, judgment, and habit. Such, we apprehend, is the only useful line of study.

As to FUTURE EXISTENCE, we have the testimony of the Scriptures that we shall exist hereafter; though we are told very little of the *what* or the *how*, and apparently for this very reason, that we could not understand it if we were told. It is to be expected, therefore, that those who inquire into this *what* and this *how*, must land themselves in fancies, unintelligible to themselves and to others. Those who reject the scripture testimony, as to a future state, must either believe in annihilation or in some vision of their own fancying, as there is not, *we are bold to say*, a single plausible or convincing argument for it in any of the multitudinous tomes of philosophy. A clever friend of ours says, he claims a future happy existence from the Deity, as a matter of right for the misery which he suffers in this world. But if the Deity judges it right to subject us to misery in this world, what natural guarantee have we, that he will not do the same in a future world; and if we reject the Scriptures, we cannot even prove that God is good or just; for some of the ancient philosophers, by natural reason, inferred just the contrary; and where is this claim of right to a happy futurity, if God is not good and just? By rejecting the Scriptures, and keeping to the natural facts, our friend has no foundation for his claim, even from his own shewing; for the admission of his misery in this world, is directly opposed to what he understands by the goodness and justice of God. Scripture alone can reconcile the difficulty.

We have already said repeatedly, that we think the materialist and the spiritualist equally fanciful and far from the facts; and we repeat the belief, that the dividing of all things into matter* and spirit has been the copious source of error, both in this and in many other scientific subjects. The only way which we know to escape from these, is to TRUST TO THE EVIDENCE OF THE SENSES AND OF REFLEXION;—to avoid unmeaning generalizations,—such as organism,—organization,—essence,—impulse,—principle,—matter,—spirit,—function,—germ,—vital manifestation,—and the like, which are, for the most part, only a learned apology for ignorance;—to analyse rigidly the notions which we attach to every important term;—and to *beware of all theories*. The only UTILITY OF any THEORY is to form a cabinet for storing up facts which would otherwise be uncon-

* A young friend has just reminded us of one respectable testimony for the existence of matter,—that of Mr. J. F. Daniell, who has *seen* the ultimate particles of matter, and has given magnified diagrams of them in Brande's Journal!

nected. The evil is, that however ingeniously the cabinet be contrived,—the facts are, in many instances, if not in all, displaced from their proper connections, and of course exhibited under a false aspect. *The theory which least displaces the facts is the best; but all theories do displace the facts.* Darwin was not far from the truth, however, when he said that "to think is to theorize;" *(Zoonomia, Intr.)* and John Hunter's sentiment, that "there are more false facts than false theories," though it has the air of a quibble, is frequently but too applicable to our reasonings. We cannot help the imperfections of our nature; we must theorize, and we must fall into error, even when we strive not to do so, and when we think we are travelling in the broad way of truth and fact.

The utility of a theory is one of the best tests of its excellence; for you may lay an excellent and secure foundation for an edifice,—you may establish it upon a rock,—and you may also build it of the best materials, and it may appear splendid and imposing. The question is, whether the edifice is of any use when it is reared? or whether it be not rather a monument of the folly of the builder. Cardinal Ximenes, when Prime Minister of Spain, built a very splendid city in what he thought a most eligible situation; but it stands, if we mistake not, to this day, a monument of his folly,—the palaces untenanted, and the streets noiseless and grass-grown. A most striking picture of a philosophic theory, and of a general philosophic principle,—plausible,—profound,—and well-sounding; but wholly useless,—utterly impracticable,—fit for nothing but filling up the pages of a book, or for giving rise to controversy, and birth to some thousand paragraphs of idle nonsense.

We have, in this paper, been anxious to avoid the IMPIETY which but too often mingles in such discussions. We have started no sentiment hostile to Christianity; and we hope nobody will apply to us the old reproach, "Ubi tres medici, duo Athei;" though we have ventured to defend Mr. Lawrence against religious persecution, and to retort on his accusers their own charges; and though we have denied the existence of matter and spirit.—Those who understand the nature of the discussion, will at once see, that we could not, within our small limits, do more than take up a few of the leading topics very briefly and imperfectly, though we trust we have treated them intelligibly. We can, however, refer with great confidence to the shrewd, learned, and lively work of Dr. Barclay, who has investigated, in a manly and intelligible manner, all the opinions which have been broached and defended concerning life, from the earliest ages. The book is full of wit, clever scepticism, and independent thinking; and though the subject is abstruse,

the author has rendered it both amusing and highly instructive. It is, in fact, an admirable text book on the subject, and all who are interested in the discussion should carefully peruse it; and, if they think boldly for themselves, they will be able to see a few errors into which Dr. Barclay has inadvertently fallen, from his decided leaning towards spiritualism. There is no sneering infidelity in the work; nor any open outrage or concealed attack upon religious feelings.

[ERRATUM.—In the above paper, p. 256, line 3, for *maintaining* read *obtaining*.]

DR. RIGBY ON UTERINE HÆMORRHAGE.*

IN noticing a new edition of this invaluable work, we feel that kind of pleasure which is experienced on meeting an old friend after an absence of long duration. But our pleasure is, in this instance, alloyed by the reflection that the venerable author is no more. Full of years and honour, he has sunk into the tomb. A just tribute to his memory has been paid by his able friend Mr. Cross, in the eloquent memoir which is prefixed to this edition. The preface, we are informed, was finished by Dr. Rigby, a few days previous to his decease. We learn from it, that he has neither made alterations in the work, nor additions to it; and we much regret the circumstance. Perhaps he could not have improved it; but we feel covetous after every idea and observation which had been formed in so practical a mind. As the book has been for some time scarce, and many of our younger readers may never have seen it, we think we shall render them an acceptable service, by offering a concise sketch of the principles and practice which it inculcates.

We scarcely need say, that it is to Dr. Rigby we are indebted for the division of uterine hæmorrhage into *accidental* and *unavoidable*. By the unavoidable is meant, that which arises from the original implantation of the placenta over the os uteri; and by the accidental, that which occurs from other causes, and which can generally be remedied by palliative measures.

In the case of UNAVOIDABLE HÆMORRHAGE, when the placenta is affixed to the os uteri, the consequences of the dilata-

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* An Essay on the Uterine Hæmorrhage which precedes the delivery of the full grown Fœtus; illustrated with Cases. By E. Rigby, M. D. &c. Sixth edition. With a Memoir of his Life; by John Cross, Surgeon. London, 1822. 8vo. pp. lxi, and 267.

tion of the uterus must be, that a portion of the mass will, at each successive expansion, be detached from its surrounding connections, and blood will be poured forth from the lacerated mouths of the vessels. It is worthy of remark, that, *at the full period of utero-gestation, it often happens that the os tincæ will be found dilated, perhaps to the size of a shilling, for some days prior to the accession of actual labour.*

This state of things must continue until the uterus is evacuated of its contents; and it is on the timely performance of this office that our author mainly insists. He asserts, as the result of his own experience, (which was most extensive,) that this is a far more frequent cause of hæmorrhage than is commonly suspected, and that nearly all those cases in which it becomes necessary to turn the child, are dependent on it. Out of one hundred and six cases of flooding recorded in the work, forty-two arose from this position of the placenta. He is confirmed in this statement by Mr. Charles White and Dr. Aikin.

Whenever, then, we are called to a case of flooding, we should immediately ascertain its CAUSE, and we can only do this by an examination per vaginam. But for this purpose, the usual method, with one finger, will not be sufficient; we are directed to introduce the hand into the vagina, and slowly and cautiously to insinuate one finger into the uterus. Should the placenta be at its mouth, it will be readily felt, and may be known by its bulk, and by the irregularity and roughness of its surface. But if the discharge is moderate, and the vagina not sufficiently dilated to admit the hand, we must wait till the parts are more relaxed; though *we must on no account quit our patient.*

When we find the placenta at the orifice, early delivery is to be resorted to; but we are cautioned against being too hasty. *Precipitancy and delay are equally to be avoided.* It has been recommended that we should never proceed to the operation till the os uteri is dilated to the size of a shilling or a half crown; but experience teaches us, that in some instances, although the woman is actually dying from the loss of blood, yet the orifice will be scarcely at all open. This may depend on the debility produced by the hæmorrhage, or on other causes. In such cases, it becomes our duty to ascertain whether the orifice be *dilatable;* and this is a point of the utmost importance. If the introduction of the hand is unattended with difficulty, we may proceed to turn with safety; but if it causes the os uteri to contract in a purse-like manner round the fingers, we should desist; and we can the more confidently do this, as this contraction is the most satisfactory evidence of the powers of the constitution. As a practical rule then, we are directed, on the

one hand, *never to deliver till dilatation can be effected without violence;* and, on the other hand, *should the woman have suffered much, not to defer it after sufficient relaxation has taken place, although the orifice should still remain closed.*

Our author next comes to consider those cases which occur early in pregnancy, and draws this conclusion, that it will rarely, if ever, be necessary to resort to artificial delivery prior to the sixth month. In those instances where the uterus is too small to admit the hand, and yet the discharge is so great as to endanger life, the plan proposed by Leroux may be adopted: it consists in plugging the vagina with lint soaked in vinegar.

But the time arrives when we must proceed to turn. In introducing the hand, after the careful dilatation of the os uteri, if the separated part of the placenta be immediately presenting, we are directed to pass the finger through its substance, and gradually to enlarge the aperture till it will allow the hand to pass through it into the cavity of the uterus; but if this cannot be done, we are cautiously to separate it on one side from its attachment, and pass the hand forward till we feel the membranes, which being easily broken, the floating fœtus can be turned, and the delivery finished, as in cases of preternatural position. In flooding cases, the feet will nearly always be found at the back of the uterus, hence the practitioner should introduce his *left* hand: the operation is readily accomplished. The extraction is to be performed slowly, and moderate pressure on the abdomen, by the hand of an assistant at the time, will be of service. The placenta commonly follows immediately, but if not, it can easily be removed. Dr. Merriman, in his excellent Synopsis (3d ed. p. 126,) says, "The patient will require very assiduous attention after such labours, and is generally very long before she recovers. I have known the phlegmasia dolens to follow this species of labour on several occasions."

In ACCIDENTAL HÆMORRHAGE, provided the discharge be not too profuse, it will be proper to wait for the natural pains; using, in the mean time, such measures as are likely to restrain the flooding, with which our readers are well acquainted. The Doctor speaks of astringent medicines as worse than useless: the external application of cold he prefers to tonics and stimulants, although he admits that cordials may occasionally be necessary, in cases of extreme faintness. By prudent management, the hæmorrhage will frequently subside, and the woman arrive at her full time, but if it should continue or return often, we may irritate the os uteri with the finger, and if this causes it to dilate so that the distended membranes can be felt, they may be pierced by a probe passed along the finger, which will gene-

rally induce the uterus to contract, so that the child will be forced down. In the relaxed state of the uterus produced by flooding, very slight efforts are sufficient for the birth of the child; the accession of pain also, commonly causes the discharge to abate: on these grounds, the introduction of one finger into the os uteri is advised. Should these means fail of the desired effect, we must extract the child by turning. This operation has been accused of being unsuccessful, but our author thinks the mischief arises from its being delayed too long. As an encouragement to inexperienced practitioners, he informs them, that it is peculiarly easy to perform, and warns them from abstaining from it through a mistaken idea of its difficulty.

Occasionally, we are not called to the patient till she is apparently in articulo mortis, but this alarming state must not deter us from turning, as it has frequently been attended with unexpected success, and is, besides, the only chance which we have of preserving the woman. It is with peculiar satisfaction that we notice the just and manly observations of Dr. Rigby on this point. Some men, he says, might object to the operation, lest they might suffer in the opinion of the world, should the case be unsuccessful; such an argument might be urged with propriety in a mere trade, but in our profession is altogether unjustifiable. We are to do that which we believe to be right, regardless of all consequences. It will, however, be proper to inform the relatives of the patient of the real circumstances, and, if possible, to have another medical man of reputation present.

It may be proper to advert here to the treatment recommended by other practitioners in flooding. Among other things OPIUM has been recommended, in very strong terms by Dr. Duncan Stewart, and other able accoucheurs. These gentlemen state that it speedily relieves the irritation of the general system, and allays the vomiting which is so often present in profuse flooding. Dr. Stewart, however, allows, that no satisfactory explanation of its modus operandi has been given. The practice consists in giving one hundred minims of laudanum, or five grains of opium as a first dose, following it up with sixty minims or three grains, at intervals of three hours, until the violence of the symptoms is abated, after which it must be gradually diminished. To this plan the majority of practitioners, we believe, are averse. For ourselves, we will not venture to *decide* on a question which has been litigated by men whose opportunities of observation on this point have been so extensive. Our *opinion*, however,

is, that though opium is a most useful agent in some cases of uterine hæmorrhage, yet its indiscriminate employment must surely be injudicious. When our object is to excite vigorous contraction, does not the administration of a powerful anti-spasmodic appear contradictory? We would limit its use to those cases in which we have to deal with great nervous irritability of the system, or violent spasmodic action of the uterus.

TURPENTINE is a remedy of which, in these attacks, we know but little, and that little is to its disadvantage. A friend of ours was induced, by the encomiums bestowed on it in the Repository (March, 1822, p. 220,) to exhibit it in a recent case of uterine hæmorrhage, but a manifest augmentation in the symptoms resulted from its use. We are rather incredulous "as to its not materially increasing the impetus of the heart's action." If it produce, indeed, irritation of the stomach, sufficient to cause nausea, or vomiting, this may be true; but if the indications are to be answered by exciting vomiting, why give this nauseous and violent medicine when any of the usual emetics would equally and less dangerously produce the desired effect? The recommendations of this highly irritating medicine, in this case as well as in puerperal fever, by the eccentric Dr. Brennan, of Dublin; and as an emmenagogue by Dr. Prichard, ought to be received, we think, with great caution. Rash experiment will only excite the *odium vulgare*.

The ERGOT OF RYE has been lately brought forward as a new remedy, although it is, in fact, an old one. We have never seen it employed, but think it might be of service in some instances; we wish it could be tried in some of our public charities, and its effects made known.

We are well aware that we have here exhibited but an imperfect view of this excellent work, but our limits will not allow us to do justice to its merits; besides, it is a book which every accoucheur should possess, and with every page of which he should be most intimately acquainted. We call on every young practitioner to study it thoroughly. Let him remember, that in those alarming occurrences of which it treats, his own professional character and the life of his patient are both at stake. He will here have no time for deliberation, he can rarely procure assistance, he cannot consult his library, he must decide and act with promptitude, and it is accurate and well grounded knowledge alone which can enable him to do this. He who is completely master of his profession will, by the result of one successful case, be amply repaid for the hours of laborious research which he has spent in the acquisition of his knowledge.

Dr. Colin Chisholm on the History and Treatment of Tropical Diseases.*

A subject so extensive and interesting as the diseases of tropical climates, by an experienced and veteran writer like Dr. Chisholm, requires our most attentive perusal and most careful analysis. We shall, however, confine ourselves chiefly to the diseases which, in our former numbers, have come less under our notice; for we take some credit to ourselves for having furnished several useful papers on the diseases of warm countries, such as our papers on Plague, (II. 1.); on the Epidemic Cholera of India, (II. 277.); on the Influence of Foreign Climates on Consumption, (I. 255. and II. 350.); on Yellow Fever, (II. 433. and III. 99, and IV. 234.); and on the Climate of Western Africa, and the Bulam Fever, (III. 1.) Dr. Johnson's very excellent and accurate work on Tropical Diseases has, in some measure, pre-occupied the ground chosen by Dr. Chisholm; but there are so many things of practical importance in each which is not in the other, that we feel no hesitation in recommending the tropical practitioner to furnish himself with both; as their difference of opinion, where it exists, will be a strong stimulus to investigation; and their frequent agreement will give him double confidence. In point of experience, Dr. Chisholm is more familiar with the West, and Dr. Johnson with the East Indies; Dr. Johnson directs his chief attention to the diseases incident to foreigners who are unaccustomed to a tropical climate, (*unacclimatés*, as they are sometimes barbarously called); Dr. Chisholm's observations are somewhat more general. They are both founded upon considerable personal experience. Dr. Chisholm expressly avers, that his work "is not a compilation of varying opinions and practice, often tending more to mislead and bewilder, than to guide and inform,"—an evil, which all who trust to Dr. Thomas's heterogeneous book, the Modern practice of Physic, so often experience.

The exhalations of marshes in the West Indies seem to give rise to the worst forms of endemic fever; and the varying heat

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* A Manual of the Climate and Diseases of Tropical Countries; in which a Practical View of the Statistical Pathology, and of the History and Treatment of the Diseases of those Countries is attempted to be given. By Colin Chisholm, M. D., F. R. S. &c. &c. pp. 236. 8vo. London, 1822. Price 9s.

of the atmosphere, to the most dangerous local inflammations. Some have fancied that the strong light and intense heat of the sun, by depriving the air of its oxygen, leaves nothing but azote and mephitic vapours for West Indians to breathe, and to this cause they trace a numerous tribe of diseases; but instead of disease, universal death would be the consequence of this state of things. Our author is disposed to suppose it possible to preserve, in favourable circumstances, in the West Indies, "a degree of health unknown in the variable climates of Europe and North America." He gives two military examples, out of many which he possesses:—The 9th regiment, stationed on Brimstone-hill, St. Kitt's, lost in five years, only seventeen men out of five hundred; and the 66th regiment, stationed on Dorsetshire-hill, St. Vincent's, lost only thirty men out of five hundred, during the same period.

Those who are MOST LIABLE to suffer both from the "remittent and the malignant pestilential—*(yellow)*—fever, are the young and adult who are plethoric and sanguineous, with rigid fibres; or who are lately arrived, and unused to the climate. The lessening the action of heat on the system of such a person, constitutes the principle on which assimilation to the climate depends; and taking care of sudden exposures to cold moist air,—as the thermometer which stood at 120° or 130° Fahr. will sometimes sink in an instant to 40°. If to this sudden variation, we add the great fatigues which soldiers and others sometimes endure on their first arrival, and the too abundant use of animal food, and other causes of gastric irritation,—we need not wonder at the prevalence of disease, and its frequent mortality. The accumulated heat in the system, excited by a vertical sun, and by stimulating food and drink, is, for the most part, thrown off by an increase of perspiration; but if this is checked by night air or cold moisture, the effect must be obvious.

Strangers, on their ARRIVAL in the torrid zone, should lose blood, proportional to their age and strength, and take five grains of calomel at night, with a saline purgative the succeeding morning; and this treatment repeated as often as there shall be occasion. This is directed, to prevent or obviate the tendency to hepatic congestion. The perspiration is to be encouraged by exercise, and drinking largely of water, with any simple addition to render it pleasant, and avoiding ardent or fermented liquors. Cold bathing, particularly in the sea, and tepid bathing, to those who can procure it, are also strongly recommended for the same purpose; and flannel shirts, worn next the skin; but, above all, anointing the body with warm olive oil in the morning, before dressing. So confident is our author of the utility

of this, that he thinks it should be enforced by a government order to the commanding-officers to oblige the soldiers to do it. In favour of this practice he draws an argument from the *unctuous* sweat peculiar to the Negroes, and intended by Nature to supply the place of the oil.

The YELLOW REMITTENT FEVER is caused, our author thinks, by impure exhalations from marshes, stagnant water, or thick woods; from damp, unventilated places; or from the decomposition of wine and other liquors escaping from casks on shipboard. Of the latter cause, he gives an instance of a ship loaded with wine, in which the casks became leaky, from the motion of the ship in a gale. The consequence was, that yellow fever appeared, of which the captain and mate died, and several others recovered; and the healthy state of the ship was not regained till after the cargo was landed. What confirms his opinion is, that the ships which lay near her in the bay were quite healthy. To these causes he might have added the exhalations produced from cane, cotton, and coffee-fields, particularly in low-lying, loamy grounds in the vicinity of the sea, which have been thought to be a leading cause of this fever. Our own opinion is, that a great portion of dogmatic theory is held forth on the subject; and we think it by no means improbable, that all or the greater part of the causes now laid down as ascertained, may in a few years be ranked with Brown's asthenic inflammation, or Hoffman's nervous fluid.—The SYMPTOMS require no detail.

Dr. Chisholm commences his TREATMENT with evacuating the stomach and bowels, which, when joined with copious blood-letting in the early stage, often arrests the fever at once; and if not, the same is to be repeated. Opium is usefully combined with purgatives in cases of great irritability of the stomach. The blood-letting must not be ventured upon after the early stage; but if the disease does not yield, five grains of calomel, with or without opium, are given every four or five hours, till salivation is induced. If the danger appears more imminent, twenty or thirty grains of calomel every three or four hours, may be tried; and to allay the vomiting and gastric irritation,—opium, ether, effervescing draughts, blisters to the inside of the thighs, and laxative, or assafœtida clysters. When calomel cannot be retained on the stomach, it must be given in clysters, and the ointment rubbed in over the whole body in unmeasured quantities, till ptyalism is brought on,—after which effect was produced, Dr. Chisholm says he never lost a patient. He promotes the action of the mercury, when necessary, by cold bathing, nourishing food, and spiced wine; the latter particu-

larly in cases of threatened collapse, after cold bathing, &c.—As the passion of fear often appears to be a great cause of mortality, every thing should be done to obviate its depressing influence. We agree with our author's recommendation, but we dissent from his premises; for it appears to us, that fear is rather the effect of the disease than a cause of its aggravation. Keeping the spirits up, and the mind cheerful, will, in either case, be of much utility. It is singular, that Dr. Chisholm makes no mention of the powerful native remedy, Cayenne-pepper, applied as a rubefacient. CASE:—A medical friend of ours, when at a distance from professional assistance, in Jamaica, was seized with yellow fever, which ran its course rapidly;—he was given over, and finally was declared dead, and was accordingly shrouded, and about to be interred, when the old negro nurse, whether out of superstition, or from having observed some feeble indication of life, rubbed him all over with Cayenne-pepper. His death-hour passed over him, and he is now alive, and following his profession in Britain.—Such strong remedies, however, ought, we think, to be ventured upon with caution.

In the INTERMITTENT form of the fever, Dr. Chisholm exhibited, as usual, cinchona, and the arsenical solution after evacuations of the bowels and bleeding. He strongly recommends mercury pushed to ptyalism as in the preceding case, and when this accomplishes a cure, there is no danger of a relapse, because the fever, he imagines, being symptomatic of some hepatic or other disorder which is cured by the mercury, cannot recur, without the recurrence of the primary disease. This rationale, like the greater part of the reasonings about symptomatic and idiopathic fevers, appears to us exceedingly hypothetical and gratuitous; for if we were to reverse the position and say that the fever was the cause of the biliary or pancreatic congestion, or of the hepatic abscess,—how could Dr. Chisholm refute us? We do not indeed maintain this opposite doctrine, but it is, we conceive, equally tenable with his,—that is, neither of them are more than plausible suppositions. We cordially agree, however, with Dr. Chisholm in his mercurial practice, which is, perhaps, the best, if not the only means of preventing scirrhus, or enlargement of the liver, pancreas, and mesenteric glands, whether these be causes or consequences of the fever; violent exercise, such as riding on horseback, will sometimes prevent paroxysms. He recommends a similar mercurial course when the fever alternates or is complicated with dysentery.

THE SYMPTOMS of IDIOPATHIC DYSENTERY, are pain and sense of fulness in the stomach and abdomen, particularly

about the umbilicus; stools thin, badly digested, frothy, and becoming afterwards a fluid slime, attended with severe and incessant griping, and the spasm of the rectum and sphincter ani, usually called tenesmus. After a few days the slime becomes tinged with blood of a bright colour, but the slime and the blood always appear distinct, and never mingled or uniform in colour. The spasm of the rectum gradually extends to the abdomen and causes most severe suffering. The depression of both body and mind becomes extreme; inflammation supervenes and is quickly succeeded by gangrene and death. The *causes* are traced to irregularities of clothing and diet, particularly eating of fruits, and green Indian corn, and suppressed perspiration from cold damp air, or among soldiers, from bivouacking on the damp ground. Or it may spread by infection. *Dissection* of dysenteric subjects has uniformly shewn the large intestines in a state of inflammation, with tubercular excrescences, like variolous eruptions, and not so frequently gangrenous blotches. These are usually most numerous in the rectum, which is sometimes so gangrenous before death, that large portions of it slough and protrude, or are discharged by stool. It is a desideratum to know the locality of the inflammation in this disease. The only known marks are, that inflammation of the small intestines produces pain about the umbilicus;—of the colon, pain in the back, loins, and about the kidneys. Deep-seated disease, however, may always be suspected when the symptoms refuse to yield to common remedies.

In TREATING the disease, he very properly attends first to the state of the skin, and after an emetic and a purgative, gives five-grain doses of James's powder, every four or five hours, till a copious diaphoresis ensues, which is to be kept up with warm barley or rice water, or by the vapour bath or fomentation, several hours, till the fœces become more natural. In this stage he gives bark with port wine or water, and one of the following pills twice a day:

℞. Opii gr. ss. ad gr. j.
Pulv. Jacob. gr. iij.
Bals. Peruv. q. s. ft. pilula.

When the rectum seems to be the chief seat of disease, leeches applied to the anus are often very serviceable; and the spasm and distressing tenesmus are relieved by a small bougie made of opium, or as we should think the injection of opium in some mucilaginous vehicle. When strangury is a distressing symptom the warm bath is to be tried, and ten drops of the muriate of iron, with poppy syrup, and water every half hour.

The lientery and weakness remaining in the bowels after convalescence is treated with bitters, astringents, tonics, &c. compound powder of ipecacuanha, chalk-mixture, lime water, catechu, quassia, cinchona, simarouba, port wine, nourishing diet, and woollen socks and flannel shirts.

The *characteristic* symptoms of HEPATIC DYSENTERY are a fixed pain at the pit of the stomach, constant head-ache, and frequent, though at first not peculiar, dejections. These are to be chiefly noted, as in other respects the symptoms are the same as in the idiopathic form, and every chance of success depends on the early diagnosis of this fatal complaint. When general coldness of the surface supervenes—cold clammy sweats, sinking of the pulse and of the spirits, the stools of a slimy brown substance, floating in a fluid like bloody water, and having an intolerable fœtor, are the irremediable forerunners of death, which will take place in from six to twenty-four hours. The liver is found, on dissection, to be inflamed, enlarged, partially suppurated and in consistence like rotten cork; the intestines, particularly the smaller ones, are more or less inflamed, and their coats in many places thickened and sphacelated.

The TREATMENT which Dr. Chisholm has followed since 1786, and which he claims the merit of introducing, is to commence with bleeding if necessary, an emetic of sulphate of zinc, or tartar emetic, followed with castor oil. He then gives mercury combined with opium and ipecacuanha in pretty large doses, every three hours, together with an anodyne clyster of starch, opium, and ipecacuanha thrice a day. When symptoms are more urgent, he increases the mercury in order to produce ptyalism as quickly as possible. He quotes the case of Park, the traveller, who cured himself of dysentery by salivation, (II. 145.) As this seems to be his great object, we suggest a method of producing ptyalism in a few hours—which, though violent and severe, may perhaps be successful in desperate cases: it is, to scarify the region of the liver, or any other convenient place, and sprinkle the raw surface with oxy-muriate of mercury. The pain produced is exceedingly violent, but it is the most speedy way which we have seen for bringing the system under the full influence of mercury. This plan was, we believe, first proposed by Mr. M'Clure in the Edinburgh Journal for 1819.

Dr. Chisholm is right, we think, in supposing CHRONIC APHTHÆ to be a modification of the inflammation attending dysentery. Owing to the mistakes of inexperienced practitioners, the disease is often rendered tedious, obstinate, and ungovernable, and even dangerous and fatal. Suppressed perspiration and irregularity in diet, being as in dysentery the cause of the

disease, it is to be cured by obviating these causes, and following the prescriptions recommended in dysentery, particularly the mercury pushed to slight ptyalism. The convalescent must abstain from fruits and vegetables, and take

℞. Oxid. Zinci gr. ¼ ad gr. j.
Assafœtid.
Pulv. valerian.
Extract. hyoscyam. ā ā gr. j.
Misce ft. pilula—tres in die.

When aphthæ appear in the fauces and mouth of dysenteric patients, it is reckoned by Sydenham, Zimmerman, Degener, and Schmidtmann, as a fatal symptom (*Quart. Journ. For. Med.* III. 476.) In a case which occurred to us last year of an infant three weeks old, the aphthous inflammation put on all the appearance of gangrene, both in the arms, the mouth, and throat. The respiration became low and hurried, and sometimes was scarcely perceptible; the eye was turned up and the pulse could not be felt—death seemed inevitable. We had immediate recourse to undiluted port wine, with which we continued for more than an hour to wet the little sufferer's mouth, by means of a camel-hair pencil. The hour had not elapsed before his glazed eye became brighter, his black and parched lips more moist, and he soon sunk into a slumber from which he awoke refreshed, and afterwards recovered rapidly. We think that the value of this remedy in gangrenous cases is not sufficiently upheld in books, however well it is appreciated by all judicious practitioners.

The chief peculiarity in Dr. Chisholm's account of HEPATITIS is, that he thinks a species of it, which he calls *anomalous hepatitis*, to be infectious, as whole families appeared to be infected with the disease, from having communicated with one of the parents, who had just been seized with it. Now, though it would certainly be wrong in us, to assert from theory that this could not take place, or to maintain, at all hazards, the hypothesis that hepatic infection is a chimæra; yet it would require a much more extensive induction of particulars than he has given to bring us to the author's opinion. But we do not see any reason to doubt that it *may* have been so,—if we allow, and we cannot deny, dysentery to be infectious. On dissection, the liver was found to be extremely enlarged and marbled on its convex surface, but no suppuration nor gangrene were observed. The diaphragm was also much affected, and its blood-vessels turgid. His *treatment* was the same as in all the above diseases, namely, blood-letting, carried in some cases *ad*

deliquium, with opium and calomel, pushed to ptyalism, and after this effect was produced the disease never proved fatal.

Dr. Chisholm claims the credit of discovering, ACUTE HEPATITIS, in 1784, in the West Indies, and distinguishing it from bilious fever, under which name were heterogeneously ranked every disease where febrile heat, hard quick pulse, and yellow suffusion of the skin were present; and the patients were accordingly all injured by bark, wine, and other tonics, administered to ward off a putrid diathesis. When he first proposed mercury, the elder physicians, with whom he consulted, were very averse to it, and gave it with "fearful hesitation."—Ptyalism is here again his *ne plus ultra*, and though he confesses that it comes on sometimes rapidly and unexpectedly, and becomes troublesome, it is *seldom* dangerous. From so experienced a ptyalist, we may learn something useful as to the mode of alleviating its troublesome effect. For this purpose he recommends—the warm bath, opium, occasional purgatives, and a gargle, composed of a pint of the decoction of dry figs, with two drachms of nitre. He has found no benefit from sulphur or the sulphuret of potash.

In CHRONIC HEPATITIS, in addition to his depletory and mercurial practice, Dr. Chisholm, with a highly laudable renunciation of his own routine, recommends in strong terms the acid bath, proposed by Dr. H. Scott, and gives an interesting CASE, in which he prescribed it for a disposition in the liver to form abscesses. Dr. Scott's formula is,

℞. aq. fontan. ℥v—adde,
acid. muriatic. ℥iij. dein adde,
acid. nitric. ℥ij.—Misce.

or of ten parts, five are water, three muriatic acid, and two nitric acid. The vessel used in warm countries is made to contain the whole body; that for cold and temperate climates, to contain only the legs, a little above the knees, and three gallons of water besides. To every gallon of water, three ounces of the composition are to be added, or the bath is to be made to taste like weak vinegar, and brought to the temperature of 85°, or a little more. The bath should not be allowed in any case to come into contact with metallic substances. We confess we were, upon the whole, disappointed with Dr. Chisholm's article on hepatitis; perhaps because we were met at its commencement with his high claims to originality in treating it.—His formulæ in the abscess case were

℞. Submur. Hydrarg. gr. iij.
Extr. Col. Comp. gr. v.
Misce ft. pil. duæ, hora somni sumend. vel pro re nata.

℞. Infus. Cascarillae ℥iss.
Liq. oxy-muriat. Hydrarg. ℥ss.
Tinct. Cinnam. Comp. ℥i.
Carb. Ammon. gr. iij.
Misce ft. haustus ter in die sumend. cum pulv. seq.

℞. Oxyd. bizmuth. gr. ij.
Pulv. Tragacanth. Comp. gr. x.
Misce ft. pulvis.

Or the following draught:

℞. Infus. Gentian-Columbæ, ā ā ℥vj.
Tinct. Cinchon. Comp. ℥j.
Acidi Nitrici. gtt. viii. ad xii.

With a seton introduced into the side, at the place of greatest prominency.

The danger of INFLAMMATION OF THE INTESTINES in tropical climates is, its tendency to terminate in gangrene, and the fever to put on the typhoid rather than the inflammatory type. He thinks, that the latter is of the utmost importance to be impressed upon the mind of the practitioner. He again advises his favourite ptyalism, after bleeding and purgatives, though we cannot, in this case, perceive the advantage of such practice, and, on the contrary, think it must often prove highly injurious, in retarding convalescence. Bleeding must be strenuously followed up, but we should prefer cupping, or the continental practice of numerous leeches applied to the abdomen and the arms, or opening a vein in the foot, to bleeding from the arm, unless in cases of decided plethora of the system. We agree most cordially with our author in his recommending of very large blisters, and in his condemnation of opium. Nothing, we conceive, can be more fool hardy than the exhibition of opium in enteritis, even under the favourable symptoms of convalescence mentioned by our author, when the pain has subsided, and the pulse become soft. If a stimulus is wanted, wine we should think every way preferable, to rouse the patient from the sinking and collapse consequent upon great depletion.

In CHOLERA MORBUS he speaks favourably of the nitric acid blister recommended by Mr. Powel and Mr. W. Scott, which often produces an immediate effect when prompt measures are indispensable. Two parts acid to a pint of water are rubbed over the part to be blistered, till the patient complains of pain, when the acid is neutralized by washing the part with a solution of the salt of tartar, The cuticle can now be easily detached, and a common blister is put upon the raw surface. By

this means, and emollient blisters alone, Mr. Powel lost only six patients out of forty-one affected with cholera. Dr. Chisholm thinks a blister produced by boiling water useful to be mentioned in cases of emergency. He rolls a towel into the form of a printer's ball, dips it into water kept constantly boiling, and applies it to the part to be blistered. In the CASE of a young lady, at Clifton, this treatment roused the energies of life, after the pulse was gone, respiration ceased, and the skin had assumed the paleness of death.

The COLICA PICTONUM, or dry belly-ache, caused by excessive drinking, and not by the poison of lead, has almost disappeared in the West Indies, where it formerly prevailed, in consequence of the very great change of manners, from excess to comparative temperance. In Devonshire, where it is endemic, it is caused by copious potations of cold and austere cider; for *no lead is used there in the vessels in which the cider is prepared.* In Gloucestershire, the cider being of a different quality, does not produce the disease. It is of importance for the young practitioner to distinguish this disease from enteritis, as the treatment must be very different. The *colica*, then, is characterized by pain at first in the pit of the stomach, afterwards fixed in the umbilicus, and darting from it in twitches all over the abdomen, and spasm, which draws the belly towards the spine, causing the patient to lean forward to obtain ease: the extremities are sometimes paralysed; the circulation is little affected. In *enteritis* the pain does not diverge in twitches; the abdomen is tumid and hard; there is no spasm, nor paralysis of the limbs; and the pulse is quick and full. Colica is treated either with opium, followed by evacuants, or by the author's universal panacea, mercurial ptyalism: the latter he recommends particularly when there is any doubt about the diagnosis, and we cannot wonder at this, for the ptyalism can, according to him, lead to no mistake, being so unfailingly applicable to all diseases.

In PHTHISIS he speaks very highly of breathing the exhalations from raw sugar, of which he places a vessel, filled with the warmest and dampest sort, in a corner of the patient's room; or has the patient commodiously lodged near the sugar plantation, or the boiling-house. When a voyage is determined on, he recommends, above all others, a ship laden with sugar to be chosen for the invalid.

In his chapter on worms, he takes occasion to recommend in high terms, the oleum terebinthinæ, not only as a vermifuge and deobstruent, but as an anodyne and antispasmodic of great power, particularly in puerperal fever. In one CASE of a poor

woman affected with puerperal fever, our author succeeded with the turpentine, to his own astonishment. Bleeding had been previously tried to a great extent, with calomel and other purgatives, without giving relief, and death appeared inevitable; when he prescribed a drachm of the oil every three hours. After the sixth dose, "the disease ceased;" but not, as we should think, so much from the effect of the turpentine as in spite of it, in consequence of the previous measures. Indeed he ingenuously confesses, as he does also with regard to his mercurial ptyalism, that turpentine will not effect a cure without previous bleeding, to the utmost limits of safety, accompanied with purgatives. These alone, however, can seldom or never effect a cure in puerperal fever, in consequence of the sphacelation which so usually follows, and which he thinks the turpentine will so far prevent, that twelve cases in fifteen may be cured. We should be much pleased to think this not exaggerated; but we are still incredulous of the sovereign powers of this violent abdominal irritant, notwithstanding the encomiums which have been so lavishly bestowed on it. When given in a large dose, it produces quick pulse, and effects somewhat like intoxication,—which is followed by alarming languor and prostration of strength. In many cases it produces inflammatory pains in the kidneys, succeeded by bloody urine. We wonder why, in the present rage for novelty and for reviving exploded medicines, no one thinks of prescribing it in asthma or phthisis, as was done by Aretæus and the old Arabians.

Upon the whole, we recommend, in strong terms, the perusal of this work of Dr. Chisholm's. Amidst much that is not new, and much that is obsolete, we often find him advocating the most recent doctrines and experiments,—which argues much in favour of a veteran and aged physician, retired from practice, and having, as might be supposed, his mind made up on most of the subjects which come under his notice. His great freedom from prejudice, if we except, perhaps, his opinion concerning the contagious nature of yellow fever, raises him very high in our estimation as an independent thinker and unbiassed observer,—two of the most valuable habits of mind which man can possess.

With regard to his controversial writings, in which he manifested considerable warmth, and some asperity, he says, that if any of his expressions have injured or offended, he most solemnly abjures them, and entreats pardon for not being aware of their absurdity, and being unsanctioned even by the weakness and ignorance of human nature. This is noble and manly, and deserves our highest commendation.

REVIEW OF THE RECENT EXPERIMENTS WITH THE OIL OF THE CROTON TIGLIUM, PRESCRIBED AS A CATHARTIC.*

NOVELTY is not excellence though it may assume its appearance, and may, for a time, dazzle the unwary by the glare of its delusions. In medicine particularly, new remedies and new hypotheses ought to be received with extreme caution; and before they can be considered as permanently worthy of confidence, they ought to be carefully and rigidly scrutinized and proved, not by one or two individuals only, who may experiment and observe under the influence of prejudice, but by many, whose different and opposite modes of thinking may discover injurious or beneficial effects, previously overlooked by the sanguine proposers. We wish, as much as we can, to avoid premature praise of medical novelties, as we conceive it to be our imperative duty to do so, lest we should mislead the young and inexperienced, who constitute a considerable number of our readers. But we are no less anxious to keep pace with the rapid improvements which are daily making in the profession, and to bring forward all the disadvantages as well as the excellencies of what is new.

Croton oil is not a new medicine, but one revived, which has been long obsolete; for it has been occasionally used in the East from an unknown antiquity: the Arabian physicians also employed it, and many years ago it was tried in Europe, under the name of grana tiglia, or Molucca grains, but soon laid aside, on account of the violence of its operation. The English practitioners in Hindostan have recently made many trials with it, in order to form an estimate of its value, and of the practice of the natives. Among these we may mention with praise, Dr. John Fleming, Dr. White, Dr. W. Ainslie, Mr. Ingledow, and

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* Observations and Experiments upon the Chemical Composition of the Seeds of the Croton Tiglium, and the Oil which is procured from them. By John Nimmo, M. D., (Glasgow.) *Journ. of Science*, XIII. 62.

Medical Report, by D. Uwins, M. D. *Month. Mag. Aug.* 1821.

On the Croton Oil, by Henry Perry, Surgeon. *Lond. Med. Repos.* XVI. 374.

Observations, &c. on the Oil of Croton. By J. G. Smith, M. D. *Lond. Med. Repository*, XVII. 8.

On the Croton Tiglium, &c., by W. T. Iliff, &c. *Lond. Med. Repos.* XVII. 16.

Clinical Experiments regarding the Effects of Croton Oil. By H. W. Carter, M. D. F. R. S. E. &c. *Lond. Med. Repository*, XVII. 89.

&c. &c. &c.

Mr. Marshall. Within the last year, a great number of experiments have been made with it in this country, in almost every variety of cases where a drastic purgative was indicated. The result of these trials we shall lay before our readers, after a very short account of the medicine itself.

The croton tiglium is an arboraceous plant, ranking among the tricoccæ of Linnæus, the euphorbia of Jussieu, and in the order monæcia, in the monadelphia class of the sexual system. The whole plant, according to Rumphius. (*Herb. Amboin.* IV. 98.) but particularly the leaves, is so exceedingly acrid, as to inflame and swell the mouth, lips, and fauces, the burning heat being felt even to the anus. The shell of the nut, according to Dr. Nimmo, is quite inert. The root is milder than the grains, but, in the form of powder, is a very powerful cathartic. The seeds, or grains, are the most generally used. They are about the size of filberts, and have a thin shell, which is, in preparing the medicine in the East, taken off, after they have been torrified, and the kernels pounded, and the mass made into pills, with honey, each containing half a grain of the croton, two or three pills forming a full dose. In this form, the croton acts as a watery purgative, operating in one or two hours.

The EXPRESSED OIL OF THE CROTON NUT, however, is what comes more particularly under our review, and of this, Dr. Nimmo has given a valuable scientific analysis, which we shall now state. By treating twelve drops of the oil with four drachms of alcohol sp. gr. .826, a solution of about two-thirds of the oil took place, possessing all the acrimony and activity of the medicine, and leaving a third portion insoluble in alcohol, even with the aid of heat, and possessing no acrimony whatever, but quite inert, and slightly rancid. His supply of the oil being exhausted in this experiment Dr. Nimmo was fortunate enough to procure some of the nuts, whose kernels he bruised in a mortar, and treated with alcohol, as before. He found that eleven parts of the mass out of the forty were taken up by the alcohol, possessing all the acrimony and other properties of the solution formerly obtained from the oil. The insoluble residuum was tasteless, but from its tinging the paper in which it was dried by heat, it evidently contained a fixed oil. This he treated with a new re-agent—*purified oil of turpentine*—procured by agitating eight parts of the impure oil with one part of the strongest alcohol, pouring off the floating impurities, and repeating the same process three or four times, till the oil is rendered nearly tasteless and without smell on pouring off the impurities which the alcohol has dissolved and floated to the surface. To those who are partial to turpentine as a medicine, this must prove an

invaluable process. The worst of it is, that however pure the oil may thus be rendered, it speedily changes, and becomes again charged with impurities as at first. The twenty-nine parts of residuum, having been accordingly digested, for a suitable time, with oil of turpentine thus purified, nearly half of it was dissolved, while the remainder was insoluble, as under.

Croton seeds 100 parts. { 27.5 acrid matter soluble in alcohol. 32.5 fixed oil soluble in ol. Terebinth. purif. 40. farinaceous matter insoluble in neither.

In repeating and varying the analysis, Dr. Nimmo found these first results to correspond. The action of sulphuric ether was next tried, and was found to be an equally good solvent, with the oil of turpentine. By pouring the ether on 198 grains of the bruised seeds, and filtering the whole with a close covered filter, Dr. Nimmo obtained two drachms by measure of oil, exactly like the purchased specimen, and he thinks this method of obtaining it preferable to the torrefaction and expression used in the East. Dr. Nimmo thinks also, that olive and castor oil, either have been or may be used to adulterate the genuine croton oil; but its purity may always be ascertained by the following process :—

Let a very light phial be counterpoised in an accurate balance: pour into it fifty grains or more of croton oil; add alcohol, which has been digested upon olive oil, of which it dissolves so little as not to injure, in the smallest degree, the alcoholic solution for subsequent use : agitate well; pour off the solution, and add more alcohol in the same manner, till the dissolved portion is diffused in such a proportion of alcohol, that each half-drachm measure shall contain equal to one dose of the croton oil for an adult. By placing the phial near a fire, to evaporate what remains of the alcohol in the bottle, if the remainder be to that which has been abstracted by the alcohol as 55 to 45, the oil is genuine;—if olive, or any other oil, little soluble in alcohol, has been added, the residuum will be in larger proportion. But if castor oil has been employed, the proportion of the residue will be smaller than in the genuine medicine.

Dr. Nimmo justly prefers the solution of the oil in alcohol to any other, as furnishing the most correct mode of apportioning the dose, it being when saturated of equal strength. For preventing the acrid heat which it produces in the mouth and throat, Dr. Nimmo recommends the formula,

℞. Alcohol. Croton, ʒss.
Syrup. Simpl.
Mucilag. gum. Arab. āā ʒij.
Aq. distillat. ℥ss.—M. ft. haustus.

The draught to be swallowed very quickly after taking a little milk, and milk to be also taken to wash it down.

These clear and accurate statements, for which we cordially thank our author, are followed by an equally interesting account of its effects on the system, the facts being drawn from upwards of a hundred instances in which he exhibited the medicine. He thinks it sufficient to state, that in not more than three or four cases was vomiting produced, and that not in a violent degree; in not many more was nausea felt; in all the cases purging was induced in a space of time between half an hour and three hours after taking the medicine; the purgative effects were generally moderate, and rarely accompanied with griping. These effects, so much milder than those produced by the oil when not dissolved in alcohol, are ascribed by Dr. Nimmo, and his medical friends, to the instantaneous and equable diffusion of the alcoholic preparation over the inner coats of the stomach, and abdominal viscera. When given in form of pill, &c. it may be applied to a particular part and excite inflammation, nausea, vomiting, and hypercatharsis.

The practice in Hindostan is, according to Rumphius (*Herb. Amboin*, IV. 98,) to give a single drop of the expressed oil, in some Madeira wine, it being thus frequently used as a purgative, particularly in cases of dropsy—"ad lympham hydropicorum per alvum præprimis eliminandum."—Dr. Nimmo tried it in a very hopeless CASE OF DROPSY, in which the most powerful diuretics and a course of mercurial inunction had been unsuccessful, and great debility and loss of appetite had come on. He began the medicine with extreme caution, and augmented the doses as she could bear it, so as to produce three or four motions daily. By the copious discharge of watery stools, the abdomen became reduced, and the appetite and strength improved; but, after two weeks' use of the medicine, the irritability of the stomach made it improper to continue it. The symptoms were threatening to return and diuretics were again tried, but soon given up. The croton was recurred to and given along with the carminatives and opiates, and a cure was accomplished.

In DELIRIUM TREMENS, Dr. Nimmo found it a powerful auxiliary to opium. In a CASE arising from excess in drinking ardent spirits, in which most distressing phantoms appeared, the wildest imaginations were produced, and sounds heard, the solution of croton had an immediate effect. In a subsequent attack, it was equally beneficial. In another CASE of a gentleman from the West Indies, who, though a person of a highly cultivated mind, had dreadful impressions of the superstition of

Obi, or African witchcraft, probably the precursor of mania—the croton solution was found to be highly advantageous.

In a CASE of a child, two years of age, labouring under what appeared to be incurable *tympanitis intestinalis*, with almost total want of appetite, it was given in doses so as to procure two or three stools daily. In four days the child was so much improved that it seemed scarcely credible; the appetite had returned, and the tympanitic symptoms had decreased so much, that Dr. Nimmo formed the most sanguine hopes of completing the cure. But though the parents, who were poor, promised to return with it, he, unfortunately, never heard of the case more.

In a CASE of excessive *corpulence*, with most alarming symptoms of determination to the head, amounting at times almost to apoplexy, a few doses produced great relief; and without having occasion to detract blood, every symptom was removed which could have been expected from blood-letting. With regulated diet and exercise, and the occasional use of the croton solution, the corpulence is slowly but progressively diminishing; exercise can now be taken without hurrying the breathing; the mind has regained its usual activity; and as the patient is not above thirty-three, he may have some chance of keeping at bay the tendency in his constitution to produce too much blood and to deposit fat.

Dr. Uwins tried it in a number of similar cases to those just detailed, particularly where the bowels seemed obstinately torpid. It is rather singular, however, we think, that he should make no mention of its unpleasant effects, particularly as these must undoubtedly have sometimes occurred, since he used, if we mistake not, the common oil of the shops, and not, as Dr. Nimmo did, the purified solution in alcohol. The rule ought to be, in making trial of new or little-known medicines, of great power and active operation, *to note particularly their disadvantages*, as well as their beneficial effects, were it for nothing more than to put patients on their guard, or to devise some palliative adjuvant for their violence. Mr. Perry likewise says, that in half-minim doses it generally produces six motions, "without either pain or other inconvenience;" though he recommends it in form of pill, made with crumb of bread. This language is certainly quite unwarrantable respecting any medicine whatever, with such active properties as the croton oil, and ought to be severely reprobated.

Dr. Smith tells us of FIVE CASES in which the oil operated in small doses, as an ordinary cathartic, though on the dose being repeated in one of the cases, it only produced a *copious*

perspiration. Another medical gentleman treated three or four cases with medicine from the same phial, without producing the smallest effect; and his incredulity of its powers was not diminished, when so much as ten minims of some which was afterwards procured from Apothecaries' Hall, had not the smallest success. Perhaps if we had *all* the history of these cases, the apparent difficulty might be removed. Dr. Smith must certainly be aware, that the same cathartic will not produce its effects in every case, let the dose be proportioned as it may. We confess we see nothing wonderful in the two sets of cases —the successful and the unsuccessful.

Mr. Iliff gives us a brief history of the medicine from Serapion the younger, *(de Simplicibus,)* M. Poinet, M. Hermans, *(Paradisus Batavus,)* M. Lemery, Geoffroy, Lewis, Murray, &c. Poinet says it is one of the strongest purgatives, and therefore *ought to be used with great caution.* Herman says, that in small doses it is *sudorific,* which agrees with one of Dr. Smith's cases. Lemery calls it the oil of the Infernal fig (oleum ficus infernalis) and says it kills worms, cures the itch, deterges old ulcers, allays suffocation of the uterus, and purges by merely rubbing the stomach and belly, with it. Mr. Iliff gives fourteen cases, chiefly of constipated bowels, and he finds that the nausea and griping are more frequent than from the Eastern accounts he was taught to believe.

Dr. Carter very properly first tried it on himself, and it produced, for two or three hours, disagreeable heat in the throat, with considerable nausea and some vomiting; but he says that moderate purgatives always affect him powerfully. He afterwards employed it in seventeen cases of various diseases, such as gout, acute rheumatism, chronic hepatitis, apoplexy, ascites, epilepsy, hydrocele, ovarian dropsy, &c. His success, of course, was far from being uniform, but he thinks it may prove a valuable addition to our list of medicines. In the CASE of ascites, the patient said she had never been so much relieved by any medicine. We have just heard of a case in which death was produced by a large dose of the oil in acute rheumatism, which brought on hypercatharsis and fatal collapse.

We leave our readers to draw their own conclusions from our brief report. We particularly recommend to their notice Dr. Nimmo's observations; and if they have occasion to try the oil, we should give the decided preference to his alcoholic solution, as the inequality in the thickness of the lip of phials, and the greater or less viscidity of the oil at different temperatures, make the usual method of apportioning the doses very inaccurate. We wish Dr. Nimmo would extend his researches.

Encyclopaedia Medica.

Observations and experiments which appear to lead to the Conclusion, that the Facial* and Trifacial† Nerves are different Portions of the same Pair, and the same in Structure and Function, by Wm. Wallace, M. R. I. A. *Lecturer on Anatomy and Surgery, Surgeon to the Dublin Infirmary for the Treatment of Cutaneous Diseases, one of the Surgeons to the Charitable Infirmary, Jervis Street, &c. &c.*

[The following is an abstract, communicated by the Author, of the original Paper read before the Royal Irish Academy, with whose regulations it would have been inconsistent to print it entire, previous to its appearing in their Transactions.—Editor.]

The title sufficiently denotes the object of the Essay.—It is long since the facts occurred which led to the opinion entertained; but they were not thought worthy of publication, until the appearance of Mr. C. Bell's paper in the Phil. Trans. 1821, pt. II.‡ The general doctrine supported in that paper by Mr. Bell, is first examined, because if it be founded in correct observation and legitimate induction, the facts which it is the principal object of this essay to communicate (although they must remain as facts) will not authorize the inference which has been drawn.

For the purpose of reference it is necessary to transcribe Mr. B.'s views on the subject :—Mr. B. is of opinion, that in man and the higher animals there are two systems of nerves—one simple and uniform, the other irregular and complex; and that to the former class belong the "nerves of the skin, the tenth or suboccipital nerve, and the fifth or trigeminus of the system of

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* Nerf Facial *or* Septieme Paire; Vicq D' Azyr &c. communicans faciei Haller &c. Ramus durior nervi auditorii sive septimi Paris, Willis, Winslow: the latter has also called it Petit Sympathique.

† Par Quintum, Willis, Mechel. Trifacial, Chaussier, N. Trigeminus. Nerfs trijumeaux, Winslow, Vicq D' Azyr.

‡ See *Quart. Journ. of For. Med.* IV. p. 142, for a full account of Mr. Bell's interesting paper.

Willis,"—p. 404, &c. Mr. B. does not inform us of all the nerves, which he thinks belong to the latter, but contents himself with alluding to one particular set of irregular and complex nerves, which he calls respiratory; and which he says are to "connect the internal organs of respiration with the sensibilities of remote parts, and with the voluntary muscles," p. 405, &c. The characters of the simple system are, according to Mr. B. that they "have all double origins; they have all ganglia on one of their roots; they go out laterally to certain divisions of the body; they do not interfere to unite the divisions of the frame; they are all muscular nerves, ordering the voluntary motions of the frame, and are the source of the common sensibility of the surface of the body," p. 404, &c. and he gives as characteristics of that division of the complex nerves, which he calls respiratory, that "they do not arise by double roots; they have no ganglia on their origins; they come off from the medulla oblongata and upper part of the spinal marrow; and from this origin they diverge to the several remote parts of the frame, which are combined in the motion of respiration," p. 405, &c.

As Mr. B. has not described any of the nerves of the complex system, except those of respiration, it follows that it is impossible to examine whether there be such a *general* system as he maintains, in any other way than by examining whether there be such a portion of that system as that which he calls "respiratory." Mr. B.'s proofs of the existence of this portion are therefore examined.

Mr. B. commences by asserting that a set of *respiratory* nerves, such as he describes, *are necessary*:—(after having observed that the muscular efforts of respiration are not confined to the chest, but extend to the flanks, neck, throat, nostrils, &c.) his words are "It is quite obvious that some hundred muscles, thus employed in the act of breathing, or in the common actions of coughing, sneezing, speaking, and singing, cannot be associated without cords of connections or affinity, which combine them in the performance of their actions; the nerves which serve this purpose I call respiratory nerves," p. 401, &c.; and he afterwards says that these respiratory nerves are—1. Par vagum—2. Facial—3. Spinal accessory—4. Phrenic—5. A branch from the brachial plexus, or from the cervical nerves, which is distributed to the outside of the thorax, and which Mr. B. calls the "external respiratory nerve"—6. Glossopharyngeal—7. Lingual.

If Mr. B.'s assertion be correct that a *special apparatus* of nerves is *necessary* for the purpose above mentioned, it would

only remain for him to point out what the nerves of this *necessary apparatus* are. It appeared therefore important to enquire, in the first instance, whether such an apparatus be *necessary*; and it is conceived that the following considerations satisfactorily prove the negative. 1. That all our organs which are sympathetically connected, must be so by a material agent, perhaps few will be disposed to deny; but, although there be a general disposition to believe that there must be such a connection, and also that the agent of such connection is probably, *for the most part*, the nervous system; it is by no means as yet satisfactorily proved, that this system is, on all occasions, the medium of connection. Therefore, although we may admit that the muscles of respiration must be concatenated, it does not follow as a matter of course, that this concatenation is accomplished by nerves.—2. Let it, for the sake of argument, be admitted, that the muscular acts of respiration, &c. are concatenated by the medium of nerves,—it does not follow, that there is a necessity for *a particular nervous apparatus* to accomplish this concatenation;—for we have innumerable examples, of certain nerves answering the purpose of preserving a sympathetic union among parts, *while they are also capable of performing other functions;* and we remark many parts connected in their actions, *without the assistance of a particular nervous apparatus*—for example, the uterus with the breast; the stomach and other abdominal organs, with the abdominal muscles, &c.

From the foregoing considerations it is concluded, that as far as can be judged *from analogy*, a *special* nervous apparatus is not *absolutely necessary* to concatenate the various acts of respiration;—but although it does not appear *to us* to be necessary, it may nevertheless exist. The next question examined, therefore is, whether it *does* exist—and it is conceived that the following remarks entitle us to say, that if it does exist, the nerves mentioned by Mr. B. will not fully answer the purpose:—1. The respiratory nerves go to parts in no way connected with respiration or expression, as the liver, interior of the ear,*

* The liver receives branches from the phrenic and par vagum; and the facial gives twigs to the internal muscles of the malleus and the muscle of the stapes. To account for the distribution of the par vagum to the stomach, Mr. B. observes, "That the stomach must be associated with the muscular apparatus of respiration, as well as the lungs, is obvious, from the consideration of what takes place in vomiting, and in hiccough, which are actions of the respiratory muscles, excited by irritation of the stomach," p. 406, &c. But he might as well say, that the uterus, the bladder, and the rectum, must be associated with the muscular

&c.—2. There are many parts which are engaged in respiration, and which *do not receive a single branch from any of these nerves*, as the abdominal muscles, the levator ani, &c. If these nerves, were for the purpose of concatenating the acts of respiration with one another, and with those of expression, they would go to all the organs of respiration and expression, and to them alone, neither of which we find to be the case.*

It is, however, admitted, for the sake of continuing the examination of the question, that these respiratory nerves do perform the function attributed to them, as far as relates to those parts to which they are distributed; and it is next enquired whether they have the characters and properties assigned to them by Mr. B., and whether they are capable of being distinguished by these characters from the simple nerves, as they are called. The characters assigned to the "respiratory nerves," by Mr. B. are therefore separately considered:—These are, 1. "They do not arise by double roots."—It is inconceivable how Mr. B. could have made so great a mistake. He enumerates among his "respiratory nerves," the phrenic and a thoracic nerve; and is there a tyro in anatomy who does not know that these very nerves arise like all the other nerves of the spine—by double roots? In fact, these are spinal nerves, for they arise from the cervical, which are nerves of the spine. Moreover, there are many nerves of the body, which do not arise by double roots, and which he does not attempt to place among the "respiratory nerves," for instance, the third, fourth, and the sixth pairs, not to enumerate the first, second, and *fifth*. After these considerations, surely the want of a double root cannot be given as a character of the "respiratory nerves."

2. "They have no ganglia on their origins." This, as a character, is shewn to be false, after the same manner as the foregoing. It is observed, "that the phrenic and external respiratory" are spinal nerves, and consequently have, like all the other nerves of the spine, ganglia at their roots; and that

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apparatus of respiration, from the consideration of what takes place in the expulsion of the fœtus, the urine, and the fœces, which are the result of actions of the respiratory muscles.

* It cannot be supposed that Mr. B. intends, in any future communication to assign respiratory nerves to the abdominal muscles; for, in the following sentence, he places a limit to his inquiries, "When the account of the nerves of the *throat*, neck, and chest, shall be laid before the society, as those of the face have now been," &c. p. 422, &c.

there are nerves, which have ganglia, (although, perhaps, not of exactly the same kind as those of the spinal nerves) and which are not enumerated among his simple nerves, namely, the olfactory. Hence his respiratory nerves cannot be distinguished by *the absence of ganglia at their roots.*"

3. "They come off from the medulla oblongata and upper part of the spinal marrow."—It is observed, that surely this cannot be considered as affording a character to these nerves; for, 1st. There are other nerves, some belonging to Mr. B.'s simple system, and some, which he has not classed in either the simple or complex division, (e. g. the 6th) which arise from the very same parts as the "respiratory nerves." 2dly. The 5th, which he considers as belonging to the simple system, arises nearer the cerebrum than any of the nerves of respiration. 3dly. The phrenic, and "external respiratory," arise along with, and consequently from the same part, as the cervical spinal nerves. Hence the respiratory nerves have (some of them) the same origin as the simple nerves, with which they are also intermixed, and by which they are surrounded, both above and below. It should be remarked, that when Mr. B. speaks of the origin of the facial, he falls into an error: he says, "The other respiratory nerves, which form so distinguished a part of the nervous system, arise *in a line* with the roots of this." The lingual does not. It deviates from that line, by the entire breadth of the *corpus olivare.*

4. After their "origin they diverge to the several remote parts of the frame which are combined in the motions of respiration."—It is observed, that the nerves go to parts no way connected with respiration or expression, and that there are organs which perform an important part in respiration to which they do not go (e.g. the abdominal muscles, &c. as already mentioned), consequently these nerves have no character derived from the nature of *the parts to which they are distributed.*

5. Although Mr. Bell, when laying down the characters of the respiratory portion of the superadded class, does not allude to the degree of their sensibility, it is evident, from his observations, when speaking of the characteristics of the symetrical or simple nerves, it is his opinion, that they are *nearly*, if not *altogether insensible.* His words are, "If the nerves be exposed in a living animal, those of this class (the original and symetrical system) exhibit the highest degree of sensibility; while, on the contrary, nerves, not of this original class or system, are comparatively so little sensible as to be immediately distinguished." p. 405. It is, therefore, thought necessary to inquire into the truth of this *general* assertion; but being a

part of the subject which more properly falls to be discussed in a future part of the essay, when on the experiments respecting the facial nerves, one remark alone is made in this place, which is considered sufficient to overturn the *general* assertion. The lining membrane of the larynx and trachea is acutely sensible.* This sensibility can only depend on respiratory nerves, for it is these alone which go to this organ, with the exception of some twigs from the sympathetic, which, however, are allowed to be insensible; therefore the respiratory nerves must be sensible, as otherwise they could not bestow sensibility.

6. It is evident that Mr. Bell wishes to support his doctrine by a reference to the nervous system of the lower animals. He compares the simple, or symetrical system of the higher orders of animals and of men, with the general nervous system of the worm and leech, and therefore infers, that the simple system is

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* This very day I had an interesting and convincing proof of this, in the CASE of a child not one year and a half old, upon whom I performed the operation of tracheotomy to obtain respiration, almost suspended in consequence of inflammation at the upper part of the larynx, excited by swallowing boiling water from the pipe of a tea-kettle while on the fire. The trachea would not permit a canula to lodge for an instant in it. The moment the canula touched the lining membrane of this tube, violent pain appeared to be produced, and a spasmodic action of the muscles of respiration was induced, by which the thymus was driven up through the external wound, and much pain appeared to be excited. I therefore removed a portion of the wings of the trachea as recommended by Mr. Lawrence, which answered extremely well, in respect to the tube itself; but from the depth at which the opening in the trachea lay at the bottom of the wound, and the narrowness of the wound, (for there was not more than a quarter of an inch, in this very young subject, between the upper part of the arteria innominata and the lower edge of the median portion of the thyroid gland) I at first experienced great difficulty in retaining the lips of the wound in the parts over the trachea, so far separated as to prevent obstruction to the passage of the air. I tried a variety of contrivances of the form of retractors in vain; when it occurred to me to construct a short canula, not longer than sufficient to pass through the parts over the trachea and down to the opening in the trachea, without entering this tube. This I found to answer my purpose most completely, and I retained it in after the same manner as it is recommended to retain the common canula, which we are desired to pass into the tube of the trachea. The instrument which I have said was a very large canula (belonging to an ascites trocar) which I cut short, I am inclined to think such an instrument, on similar occasions, would be very useful. The operation on this young subject I found to require a great deal of caution; but, with this, it is very practicable. I have, at this moment, every reason to be gratified by the result. The child has been amazingly relieved, and there is every hope of its recovery.

independent of the complex one, as it is the only system in the inferior animals. Respecting this subject, it is observed,—Does not Mr. Bell suppose an analogy to exist here, which does not exist? for should we not consider the nervous system of these lower animals as the type of the system of the sympathetic nerve of man, rather than of his spinal marrow?*

From the preceding, it is concluded that there are no characters which will serve to distinguish those nerves, which Mr. Bell calls respiratory, from those of his symetrical system, and consequently that he has failed in the attempt to arrange the nervous system of man in two classes, each having appropriate anatomical and physiological qualities. There are very many other observations made respecting the general opinion or doctrine of Mr. Bell, when discussing the particular structure and function of the trifacial and facial, which still further refute this doctrine, but which we purposely avoided in this place, as they more naturally fall in hereafter.

That part of Mr. Bell's paper which more particularly relates to the subject of this essay, is next considered. It is observed, that although it appears certain, that Mr. Bell's general doctrine must fall to the ground, let us investigate his opinions respecting the structure and function of the facial and trifacial nerves, and we shall thereby have an opportunity of communicating the result of our own observations on this interesting subject. Mr. Bell is of opinion, that the facial and trifacial have different structures; that the former is not a nerve of sensation, but confined in its functions to the office of associating those motions of the head which are subservient to expression and respiration; and that from the latter is derived the sensibility of the skin, (to which it is distributed,) and the regulation of all the motions employed in mastication, &c. As Mr. Bell uses, in a particular manner, the nerves of the face in support of the division of the nervous system which he has adopted, if we prove that his conclusions respecting them are also erroneous, we have further proof that his general system is false; but even if we should fail in this, (and whether we do or not it will be for the reader to judge,) it would not follow, *after what has been said*, that his general doctrine might be correct.

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* Reil, Archiv. für Phys. and Anatomie, et Physiologie du Systeme nerveux, en general, &c. Par Gall et Spurzheim. 4to. Paris, 1810.

Before entering on the consideration of the experiments on the nerves of the face, or the conclusions to be derived from them, the following account of the origin of the opinion which the essay supports, is first given :—"Some years ago there occurred to me, during my dissections, a very unusual arrangement of the nerves of the face ;—all that part of the facial of the right side which is distributed to the side of the face and temples, was wanting, and its place supplied by a trunk from the second division of the trifacial, which trunk turned round the posterior edge of the ramus of the jaw, and emerged through the parotid, having an appearance extremely like the facial, in ordinary circumstances. I had fortunately known the individual when alive, and there was not any thing remarkable in the expression of his countenance. The conclusion to which I was, of course, irresistibly led by this lusus, was, that these nerves must be possessed of exactly the same properties and structure, or the one could not supply the place of the other. Such an opinion was also, on consideration, greatly supported by the well-known similarity of arrangement, and intimacy of connection, which these nerves have in their natural distribution. I am now extremely glad, as the subject of these nerves has become of importance, that I mentioned the occurrence, immediately after it happened, to several scientific friends, and, among others, to Dr. Spurzheim, who, in his lectures in this city, alluded to the fact.

"When the occurrence happened, I had neither opportunity nor leisure to follow up the inquiry. I, however, held the subject in recollection, and when I began, in 1817, to lecture on anatomy, I directed my attention particularly to the consideration of the consequences to which such a view of these nerves would lead; but before I permitted myself to believe in the truth of an opinion so much opposed to that generally received, I felt it incumbent on me to inquire more particularly into the simple anatomical question. I was naturally led to suppose, that if these nerves were in reality possessed of the same structure and function, they would arise, or hold connection with the same or analogous parts of the brain. I consequently took every opportunity of examining this point, and I was, at last, fortunately able to trace these nerves to the same part in the brain, and to shew that they in reality spring from precisely the same source; and moreover, that the reason why they were ever considered distinct, must have arisen from their union in the substance of the brain being concealed by the commissure of the cerebellum, or Pons Varolii. Ever since this period, I have

been in the habit of demonstrating these nerves as different divisions of the same pair. The many additional reasons for supporting this opinion, derived from comparative anatomy, and from experiments on animals, I will now proceed to mention; but first shall say a word respecting the mode of dissecting the roots of these nerves, so as to shew their junction in the substance of the brain.

"When we look at the part of the brain from which the facial and trifacial emerge, the latter has evidently the aspect of passing downwards, outwards, and backwards, through the substance of the commissure of the cerebellum;* and the former, by the manner in which it turns round the lower border of this commissure, has evidently a direction upwards, outwards, and forwards, so that they appear to penetrate the surface of the brain in such a manner as will enable them to run towards each other. The facial, at the point where it leaves the brain, corresponds to the interval or groove which separates the corporia olivaria from the corpora retiformia of Ridley, and the trifacial to the point of junction of the Pons Varolii with the crura cerebelli. If the brain be tolerably firm, the union of these nerves in its substance may be most easily shewn by making an incision of two or three lines in depth through the pons, bounded on the outside by the nerves mentioned, and then, by scraping with the end of the handle of a knife made smooth, the transverse fibres of the pons on the inner side of the incision, or, in other words, from without inwards. We must take care not to disturb the nerves when they are connected with the surface, but use them as our guide in searching for their continuation in the pons, and we shall clearly observe the two nerves united in one at their origin. It may be proper to mention, that there are sometimes a few fibres belonging to the trifacial, which cannot be distinctly traced through the pons.†

[Mr. Wallace has very kindly promised to send us the remaining part of his interesting paper, with additional experiments.—EDITOR.]

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* The Commissure of the Cerebellum, is the name given by Gall and Spurzheim to the Pons Varolii.

† Gall and Spurzheim, L. C. Page 106, and Santorini.

Remarks on Nævus Maternus, with a Case, by George Langstaff, Esq.

To the Editor of the Quarterly Journal.

Sir.—Should the following additional practical observations to those I gave on Nævi Materni in your last Journal, be considered worthy of publication, you will perhaps give them a place in your next number.—I am, your's respectfully,

Geo. Langstaff.

My motive for publishing the case and dissection above alluded to, was with a view of making known some of the varieties of the disease, more especially of the difficulty of ascertaining by examination, during the child's life, the depth of the diseased growth, in consequence of its very intimate connexion with the parts seated remotely from the integuments, which fact, in other instances of the kind that may be met with, would, in all probability, make an operative surgeon cautious in deciding on the propriety of the extirpation of such nævi.

I have removed at different times, and from different patients, a great number of subcutaneous nævi, some of which were very large; but their extent and depth would be nearly as accurately ascertained by the touch, as we find to be the case in moderate sized encysted tumors. In all the operations the hæmorrhage was considerable, and in some rather alarming, although the healthy skin was removed as far from the diseased, as prudence dictated, and the situation of the parts allowed.

Lately, I removed the principal part of the upper lip, affected with nævus, from a child, three months old, which, from its magnitude and discoloration, gave the child such a hideous appearance, as to make the parents very anxious to have an operation performed to lessen the deformity, even at the risk of its life. The labial artery, which was very large, bled freely; but the principal divided trunks and main branches were easily secured. Long, firm, but very slender, silver pins were employed to bring the divided parts together, which were allowed to remain in five days. The incised parts at this period from the performance of the operation had united, except where the very small silk ligatures, which secured the arteries, remained, which in the course of a week were removed. The operation succeeded beyond expectation, and there will be scarcely more unsightliness than is seen after the common operation for hare-lip. I have mentioned this case to shew, that the operation for hare-lip may be performed successfully at an early period after the birth of the child,

and from what I have seen, I am induced to think, that in all cases of hare-lip, not connected with a bifid state of the palate, &c., that the operation ought not to be deferred the period it has been recommended, even by several eminent surgeons, which does not appear necessary, and keeps the parents in a state of painful anxiety.

To conclude, I think it right to state, that I have been fortunate enough to destroy, by the application of potassa fusa, some of the smaller kind of elevated subcutaneous nævi, such as appeared disposed to increase, situated on parts of the body likely to cause disfiguration, and to require at some period to be removed by excision. The sloughs produced by the caustic were thrown off in the same manner we see them, when this agent is made use of for the formation of an issue, and in no instance attended with hæmorrhage. But I do not wish it to be supposed, that I should recommend this treatment to nævi of a large kind. The largest in which I have employed the caustic did not exceed externally the section of a large cherry. In removing nævi from the tip of the nose, a case not unfrequently met with, which gives the face of the child a very whimsical appearance, I have been more perplexed with suppressing the hæmorrhage than in any other, the part being so well supplied with arteries, and not allowing of the removal of a necessary quantity of sound integuments.

I purpose trying caustic, in the next case of the kind that may come under my care. G. L.

CONTINUATION OF MR. LLOYD'S PAPER ON VARICOSE VEINS.

The preceding cases are interesting not only so far as they demonstrate the safety of dividing varicose veins, but also by shewing, that ulcers of the legs, connected with a general varicose state of the veins, will speedily heal, notwithstanding they have previously resisted every other mode of treatment, if merely the varices which are immediately adjoining them, and tender to the touch, be divided. The first case also proves, that although ulcers dependent on varices have existed for many years, they may be as certainly and as speedily healed, as those which have existed only for a much shorter time. The same points are further confirmed by the following case; and it moreover shews, that an ulcer of nearly twenty years standing may

be healed in an old person, without any injurious effects ensuing, if at the same time a proper regimen be observed.

Early in the spring of 1818, I was consulted by an old lady, between sixty and seventy years of age, on account of a painful ulcer on the small of the right leg, which occasioned her to be so lame that she could hardly walk about the house. The ulcer, she informed me, had existed for nearly twenty years; it was about an inch and a half in length, and an inch and a quarter in breadth; its edges were hard and elevated; its surface was of a variegated and glossy appearance, and it discharged copiously an offensive oily kind of matter. The skin surrounding the lower part of the leg was of a dark reddish purple colour, seemed tightly stretched over the other integuments, and had that peculiar shiny appearance which so commonly attends old standing ulcers of the leg. The veins of the leg were not much elevated except at the upper part of the calf, but still they were much dilated; and upon examining the parts about the wound with my hand, I distinctly felt a large varix, with hardened edges, and tender to the touch, situated between the tibia and fibula. This varix therefore was selected to be divided, for although there were in the neighbourhood of the ulcer other varices to be felt, still there were none of them either inflamed or tender. In a few days before the operation was performed, the patient was confined to vegetable diet, and all stimulating drinks were abstained from; her bowels were freely opened, and the limb was kept constantly in an horizontal position. The operation was performed in the same manner as in the preceding cases—about twelve ounces of blood were abstracted at the time, and no bad symptom ensued. The wound occasioned by the operation healed by the first intention; and on the third day, when the dressings were removed, the edges of the old wound were found white, and fibres of skin were seen shooting from the whole circumference. The process of cicatrization, moreover, went on so rapidly, that the old ulcer, which had previously for so many years resisted every attempt to cure it, was, by the nineteenth day, completely healed. The pain, too, which had before been a source of constant trouble, wholly ceased; and indeed the success of the operation was altogether so complete, that the leg remained perfectly well to the time of her death, which happened about three years and a half afterwards. The bandage was worn for several months after the ulcer had healed, but subsequently it was left off. As the ulcer in this case had existed for so many years, I considered it right to direct the patient, always to take some opening medicine two or three

times a week, and to be very moderate in her diet. By persevering in this plan of treatment her health not only continued unimpaired, but it was really better than when the ulcer was open.

The rapidity with which old ulcers, connected with a varicose state of the veins, heal after the source of irritation is removed by the division of a diseased varix, is often quite astonishing; and I never saw it more strikingly evinced than in the following case:—A poor man, sometimes employed as a hackney coachman, sometimes as an ostler, had had a large ulcer on his right leg, with a varicose state of the veins, for fourteen years, and it had resisted every attempt to cure it. He had been repeatedly in the different hospitals, and I had known him in St. Bartholomew's at three different times; and at one period his leg was regularly strapped for several months, by a pupil of the late Mr. Baynton, but all without effect. When he was last in the hospital the ulcer was of an immense size, extending nearly all round the leg, and for between three and four inches in the longitudinal direction, and from it there was a most profuse discharge of offensive matter, and frequently of blood. At this period I was house-surgeon of the hospital, and attended him under the direction of Mr. Abernethy, and for several months made use of strapping and various other remedies in succession, but without any benefit to the wound. The man had therefore given up all expectation of having it cured; and as it was excessively painful, and his health was suffering very much, he earnestly solicited that his leg might be amputated. Such was the state of the case when it was proposed, and I was directed, by Mr. Abernethy, to divide some diseased varices which there were adjoining the wound. To this the patient readily consented, but, I believe, without any sanguine expectation of much benefit being derived. The case was, indeed, as unfavourable a one as could well be selected, for the whole of the cutaneous veins of the leg were more or less dilated; the patient's health was much impaired by hard drinking; he was subject to frequent attacks of inflammation, and swelling of the whole leg, which were often attended by rigors and violent sympathetic fever. The varices adjoining the wound were very little elevated or visible, from effusion into the subcutaneous cellular substance, but their hardened margins and excessive tenderness, rendered them easy to be discovered by the touch. There were three of them in a diseased state, all of which I proposed to divide, but at separate periods. The first which I divided was nearly an inch and a half across, and situated partly under the edge of the ulcer. About ten ounces of blood were abstracted from the wound, which had healed by the end of a week, and no bad symptom whatever followed

the operation. One of the other varices was then divided, on the same side of the leg, but higher up. The wound occasioned by this operation healed as readily as the first, and about the same quantity of blood was taken away from it. The beneficial effects of these operations were most evident, for immediately after the second, all the pain which had so long and so much tormented the patient, altogether ceased, and the ulcer which had so long resisted every attempt to cure it, began rapidly to heal. Indeed the healing process went on so exceedingly fast, that it was not thought necessary to divide the other varix which has been stated to have existed, and in less than seven weeks the whole of the immense ulcer was entirely healed, and the patient discharged from the hospital. At the time the patient left the hospital, the varices that had been divided appeared perfectly obliterated, and pressure made on those parts occasioned no more pain than on a sound part; but the varix which was not divided was still tender to the touch. Such a state of the undivided varix, at the time of his leaving the hospital, rendered it probable that it might be necessary ultimately to operate on it also; and this was very near being the case, for a few weeks afterwards he returned complaining of swelling and pain in the leg, the whole of which was also much inflamed, but fortunately these symptoms speedily subsided by the use of common measures; and, some months after, I met the man engaged as a hackney coachman, at which time his leg was sound and free from pain.

There is a species of erysipelatous inflammation of the legs to which adults, but especially those about the middle age, who have a varicose state of their veins, are subject, which I believe is permanently curable by no other means than by the division of the diseased varix or varices. This affection is extremely painful, and as it subsides, leaves the skin permanently discoloured. Considerable thickening often takes place in the cellular substance between the veins and skin, so that the prominence of the varicose veins is obscured, and the diseased varix, as I have stated before, can only be discovered by the touch. In cases of this description, it often happens that considerable swelling attends the inflammation, and that the attacks are frequently repeated, and that the inflammation never entirely, but only partially subsides. In other cases, instead of deposition into the cellular substance, an eruption of small, irregular, hardly elevated vesicles succeeds to the inflammation, or the skin cracks, as it were, or becomes excoriated, from which there is a copious effusion of an acrid serous fluid. In these cases the attacks are not so sudden nor so violent as in the

former; but when once this affection has come on it seldom subsides to any great degree, but almost constantly remains a source of great uneasiness to the patient, till, by some means or other, the diseased varix is cured. The ulceration which attends these cases seldom extends beyond the skin, and usually heals as the violence of the inflammation subsides, leaving the skin tender and covered with a kind of scurf. These cases are often so extremely painful, that they prevent the patients using any exertion, and sometimes wholly confine them to the bed, and also the health of patients becomes much impaired from the want of rest and the constant pain which they suffer. The following cases will more fully illustrate this species of disease.

Mary Billin, about 35 years old, was admitted into St. Bartholomew's hospital, on account of a disease of the parts surrounding the ankle and small of the right leg. The disease was so painful that it had obliged her to give up her business, and go into the workhouse. It had been in this state for more than three years. When she came into the hospital the parts about the ankle were much swelled, and of a purple red colour. The skin also was cracked, and superficially ulcerated, from which there was constantly effused a watery fluid, of an acrid irritating nature. Her health also had suffered so much that the whole of the vital functions were more or less disordered. This patient remained in the hospital for several months, during which time every variety of soothing applications were tried; and besides these she was bled from the arm more than once, the greatest attention was paid to her diet, and to the state of her bowels, and she was kept constantly in bed; but all without effect, for when discharged from the hospital she was in no essential respect better than when she was taken in. While she was in the hospital the disease was considered to be one of those intractable cutaneous affections of an anomalous nature which are occasionally met with; and its connection with diseased varices was not at all suspected. When she left the hospital she was made an out-patient, and went to reside at her mother's, and it was at this time I ascertained the true nature of the disease. The mere appearance of the leg afforded no clue to the cause of the disease, as the dilatation of the veins was hardly at all visible, but it was readily ascertained by the touch, for on tracing with the fingers the surface of the leg, the veins were found generally dilated and tender, and a large varix, with thickened edges, and exquisitely tender, was felt about the centre of the diseased part. It being stated to the patient that this was the cause of the disease, and that it could only be cured by an operation, she readily consented to have it performed, and accordingly I divided

the varix as in the preceding cases. To make a complete section of the varix it was necessary to introduce the knife almost its whole length, which is full two inches and a half. About twelve ounces of blood were abstracted from the vein at the operation, and the subsequent treatment was as usual. The pain occasioned by the operation was severe, but it existed only for a very short time, and after this the patient was much easier than before the operation, and slept soundly all night, which she declared she had not done for above two years before, The success of the operation was most complete, for in less than a week the disease had subsided so much, that very little inconvenience was experienced from it; and at the expiration of a fortnight the patient was able to walk almost as well as if she had never had any disease in her leg. After the operation the health of this patient very much improved, and she followed her regular business, taking a great deal of exercise, for about a year and a half, but at this period she was again laid up by a similar affection of the other leg, and great attendant disorder of her health. To remove this affection, bleeding, bandaging, and cooling washes were employed, but without affording any decided relief, but it was speedily relieved by adopting the same means which were so successful in the former instance. After this, I saw this patient repeatedly, at different periods, and when I saw her last she informed me, that the legs continued well, and free from pain, except after using more exercise than common, when some of the enlarged veins occasionally became somewhat painful.

In four other cases, very similar to the last, the division of the diseased varices proved equally successful. Two of these occurred in patients who had been in the hospital for several months without receiving any benefit. One of them was in Faith's the other in Hope's Ward; and both the patients were young women, the oldest being not much more than thirty. In one of them the disease was precisely as in the last case; but in the other there was a large ulcer, as well as the cutaneous affection. In the former case the patient had been a nurse in the hospital, but on account of the disease in her leg had been obliged to give up her situation, which, however, after the operation, she resumed, and without subsequently experiencing any inconvenience. In the latter case the patient had had, a short time before the varix was divided, a severe attack of inflammation of the whole leg, accompanied by such a high degree of sympathetic fever, that her life was almost despaired of, and yet no bad symptoms whatever followed the operation. The state of the ulcer, too, immediately improved, and the healing,

which before had resisted every means which had been employed, took place without difficulty.

The next case occurred in a man of the name of Spiers, between thirty and forty years old, and a gardener by employment. The disease was principally confined to the ankle of the right leg. It had existed for between three and four years, and during the last six months, a small ulcer had also broken out, and altogether the effects of the disease were such that the patient, although a strong and otherwise healthy man, was almost wholly incapacitated from following his employment. His health also suffered considerably. When first I saw him, the whole leg was much swollen, but, as I have mentioned before, the actual disease was principally confined to the parts in the neighbourhood of the outer ankle, and yet the pain he suffered was so severe as to greatly deprive him both of his rest and appetite. The diseased vein was situated between the lower part of the fibula and the tendo Achillis, and was very much dilated, and extremely tender. The operation was performed in this case as in the others, except that the section was made obliquely across, to include as much as possible of the diseased vein, which was of very great extent. My friend, Mr. John Ware, had seen this man before, and therefore kindly assisted me in the operation. As in every other case, no bad effect whatever followed the operation, and the disease for which it was performed, so speedily subsided, that in less than a month the patient was enabled to resume his ordinary occupation. This case could not, however, be said to be complete, because a portion of the vein which had not been included in the section, continued tender to the touch, so that though the disease of the other parts was now cured, its return was rendered probable: and this I stated to the patient, and proposed to him to allow the operation to be repeated; but as he had got rid of his immediate trouble, and the time of the year made it important that he should be in his garden, he would not consent to it. Since that time, though more than three years have elapsed, a second operation has not been performed, and for more than two years the ankle remained sound; but subsequently the disease has in some degree returned, and the patient himself considers that a second division of the vein will be necessary; and when I saw him last, was quite ready to submit to it, so convinced was he of the benefit he derived from the first operation.

The next case occurred about six months ago. The patient was a middle-aged female, of the name of Whitford, daughter-in-law of the surgeon's instrument maker of that name. She had been subject to a painful affection of her right leg for seve-

ral years, which during the last year had so much increased, that it had obliged her to confine herself almost entirely to the house. The leg frequently swelled to a very large size, and was generally covered, more or less, by a vesicular eruption. How much the affection, in this case, resembled idiopathic erysipelas, appears from its having been considered as such, and treated accordingly by a physician, who had attended the patient two or three months before I saw her. That, however, it was wholly dependent on the morbid condition of the veins, is proved by the whole of the inflammatory symptoms subsiding upon the division of a very large and diseased varix, which there was on the inside of the upper part of the small of the leg. About a pound of blood was taken away at the operation; and perhaps to this source some of the benefit which followed may be attributed; but it appears to me, that the loss of blood was only beneficial in a secondary degree, because, in this case, the patient had, two or three times before, been bled from the arm without the pain or inflammation being at all relieved; and also, because the good effect of the operation, as far as relates to the veins, was principally, if not wholly, confined to the varix which was divided; the other varices that existed at the same time, though of smaller size, and less diseased, not being materially benefited by the operation, but being still in such a tender state as to render it probable that they will ultimately require division. The loss of blood in this case induced a complete state of syncope, which has been stated to be a rare occurrence, as the consequence of abstraction of blood from a varicose vein.

Although I have stated that the mere abstraction of blood does not occasion any permanent benefit when there is actual disease of a varix, still I am well aware that even then it often affords considerable temporary relief, and that it is really of the greatest service when, from excessive distention, the veins are in a painful condition. I could, indeed, adduce many cases proving the benefit which is sometimes derived from taking blood away from varicose veins.

Before I conclude this paper, I must beg to observe, that it has not been my object to consider the general treatment of varicose veins, but only those points to which I have specifically adverted in the beginning.

4, *Falcon Square, January* 21*st*, 1822.

[In consequence of some typographical errors in the former part of Mr Lloyd's paper, our readers are requested to cancel L and M, and substitute the corrected sheets given in No. XIV.]

CASE OF DISEASE OF THE FEMUR, RESEMBLING CARCINOMA.

BY H. PUGH, ESQ.

To the Editor of the Quarterly Journal.

SIR,—A female, aged about fifty, in August, 1821, complained of pain in the left hip, extending to the knee; the pain was referred to the course of the sciatic nerve. On accurate examination, no circumstance induced the belief of disease of the joint. She became gradually worse, receiving no benefit from constitutional or local remedies. About the beginning of October she was obliged to take to her bed: shortly after, any attempt to change the position of the limb was attended with the most acute pain, which altogether precluded moving it for the purpose of examination. Her existence was protracted till the middle of January, 1822, when she sunk, as if exhausted by excess of suffering.

On examination, twelve hours after death, the appearances were as follows:—

The hip was slightly swollen; the limb œdematous; and shortened about two inches. The sciatic nerve was not diseased; the articular cartilages of the joint were healthy; but the superior extremity of the femur presented a change of structure, which I had never before observed, or seen described. The disease appeared to comprise about three inches of the cylinder in extent, together with the trochanter, neck, and head of the bone. It was considerably larger than when in a natural state, and firmly attached to the surrounding muscles, which were healthy, though much wasted. On a longitudinal section, it was found to consist of a substance, of a pale yellow colour, hard fleshy consistence, and cut with difficulty with the scalpel; and which I should denominate a carcinomatous tumour, only that it was interspersed with spiculæ of bone, which were far more numerous towards the head, trochanter, and, in fact, the whole of its exterior surface, than interiorly, where they were in some parts nearly imperceptible, in others, wholly absent. Detached laminæ of bone were, in two or three instances, adherent to the exterior of the mass. The medulla nearest the disease very much resembled it, both in consistence and colour; it was much firmer than usual, for the space of an inch or two, gradually approaching its natural state as examined at a greater distance from the disease. The cancelli were also destroyed for the space of about two inches from the part where the exterior laminæ were deemed healthy. The form of the head was not

destroyed; it was covered with cartilage in a perfect state; and the synovial membrane could be distinctly traced over its surface. It was quite soft, easily compressed, and rather enlarged, filling up the acetabulum, and admitting of very little or no motion. Interiorly, part of the osseous matter was absorbed, without deposition of any other substance, only having an undue moisture. The neck of the bone was nearly lost, which, I presume, may be accounted for, as well as the shortened state of the limb, by the action of the muscles drawing up the bone, and not meeting with the usual resistance.

I have already stated how closely the diseased growth in the femur resembled carcinoma, and in this view of the subject it may be interesting to remark, that about twelve months previous to her decease, this patient underwent an operation for the removal of a tumour from her right breast, which presented every characteristic of schirrus. During her late illness, she complained of pain in the part, but nothing could be discerned indicating a return of disease there.

Bath, March 5th, 1822. HENRY PUGH.

Case of a Spina Bifida treated according to the Method of Sir Astley Cooper. Communicated by M. Richt, of Berlin.

THE wife of a labourer was delivered, at the full period of gestation, of a healthy-looking child, on the lower part of whose spine was a transparent swelling of the size of a walnut. The child seemed paralysed in the lower extremities, and was subject to involuntary discharge of the urine and fœces. On examination the parts were found to have all the characters of spina bifida; the skin forming a bladder, in which fluctuation was distinctly felt. The lower extremities seemed to be well nourished, notwithstanding the paralysis. The little patient had great difficulty in sucking. After evacuating by the needle a small quantity of lymph, moderate pressure was applied, and *the midwife who attended was ordered to repeat the puncture and the pressure!* In four days the physician found the tumour considerably diminished, and the skin very hard, and a great number of minute blood-vessels ramifying through it. The paralysis of the lower extremities seemed to give way, the involuntary evacuations ceased, and sucking was more easily performed. The treatment *was ordered* to be repeated. The midwife having been called to another patient, *the mother was instructed to perform the puncture and the pressure!* But the good woman, in haste to evacuate at once the contents of the tumour, made a considerable opening. Spasmodic fits soon supervened, and the infant expired about twenty-four hours after the puncture had been made.

Dr. Hale's Experiment on himself, by injecting castor oil into his Veins.

AFTER repeating on dogs and rabbits, a number of experiments, by injecting different substances into the circulation, Dr. Hale had the intrepidity to try one on himself. He accordingly injected half an ounce of castor oil, of the temperature of 70°, into one of the veins of his arm. When the operation was finished, he says, he felt very well for a short time; but, about ten minutes after the whole was injected, he perceived a curious feeling, or taste of oiliness in the mouth. Very soon after, while talking in good spirits and washing the blood from his arm, he felt a slight nausea, with eructations, and some commotion in the bowels, and a singular indescribable feeling ascending suddenly to his head. At the same instant he felt some stiffness of the muscles of the face and jaw, which cut short his speech in the middle of a word, accompanied with a bewildered feeling in his head, and a slight faintness; but, on sitting down, he recovered himself in a few minutes. His bowels continued uneasy with wandering pains, but he had no motion which he could ascribe to the oil. The strange feeling in his head, the nausea, and the oily taste in his mouth, remained all day. Next day he had slight chillness, but no general rigors; his arm was painful, and he was feverish and lost his appetite, and was altogether too ill to make use of either his bodily or mental faculties. This continued several days, and it was some weeks before he regained his strength and vigour. Many of the symptoms must have arisen as much from the irritation of the wounded arm, as from the oil, and some of them, we should think, from fancy. Dr. Hale concludes, very justly, that no advantage is to be gained by this mode of exhibiting emetics, purgatives, or other medicines, while it is liable to hazard and danger.—*Boylston Medical Prize Dissertations, by E. Hale, jun. M.D. &c. Boston, (New England)*, 1821.

Medical Society of London.

Bolt Court, Fleet-street, 8th March, 1822.

DR. COPLAND, Editor of the Medical Repository, delivered the Annual Oration before this society to a very crowded audience. The subject was the phenomena and laws of the universe,—galvanism, heat, attraction, chemical affinity, magnetism, and animal life and intelligence. With the exception of animation and intelligence, he explained all physical changes to arise from two electric fluids generally diffused through the universe, which are developed and decompounded on the surfaces of the planets—pass off in an uncombined state towards the sun—and, when they reach his surface, are again combined, flowing back in a united state to the planets, to be again disunited as soon as they reach their surface. From these two electric fluids and their changes he accounted for gravity, light, heat, magnetism, chemical affinity, &c.

Animation and intelligence, he said, cannot be explained either by the two electric fluids nor by any other principle belonging to inorganized matter; and therefore we must have recourse to another principle to account for these—namely, a superior, immaterial principle, altogether distinct from the inorganic world. He gave an interesting comparison between the organization and functions of the lower and the higher animals, and particularly illustrated what has been called the continued line of gradation in nature. He justly exposed the fallacy of supposing such a line, which, though plausibly supported by some appearances, yet, so far from being continuous, is frequently interrupted by breaks, and even chasms, particularly in passing from the inferior animals, who seem to have no reflection, to man whose rationality places him so much above the rest of the animal creation. Dr. Copland alluded also to his peculiar theoretical views of the nervous system, as divided into the nerves of the brain—the spine—and the ganglia, which views, we understand, he is about to publish in a work on gene-

ral physiology and pathology,—and constituting an improved General System of Medecine.

Dobereiner's Analysis of Oxalic Acid.

M. Dobereiner finds, that oxalic acid contains no hydrogen, but is formed of equal volumes of oxide of carbon, and carbonic acid combined with water, the water being essential to the acid. For when it is exposed to fuming sulphuric acid, like that of Nordhaussen, whose affinity for water is very great, the acid disappears, and a gas is produced 9.4 cubic inches of which contains 4.7 cubic inches of carbonic acid gas, and the remainder is oxide of carbon. If there had been hydrogen present, sulphurous acid would have been formed, or the carbonic acid, and carbonic oxide, would have been in different proportions.—*Annales de Chimie et Physique.*

Montague's case of Pulmonic Disease in a Duck.

Our late distinguished and indefatigable Naturalist, George Montague, Esq. had a scaup duck sent to him, which appeared to be sickly, and died in a few days. On dissection he found extensive disease of the lungs, and the membrane surrounding them much thickened, apparently from chronic inflammation. But what was most remarkable, the whole cavity of the thorax where the disease prevailed was covered with *mucor*, or blue mould, affording a singular example of a vegetable growing within an animal. It is to be remarked, however, that the parts where the fungus grew were in a complete state of decay.—*Edinburgh Encyclopædia.*

This singular case forms a good illustration of the observations of M. Gaspard in Magendie's Journal, to which we have alluded above.—*Quart. Jour. For. Med.* IV. 230.

Taddei's New Antidote to Corrosive Sublimate

Professor Taddei, of Florence, has published an 8vo. pamphlet, proposing the gluten of wheat as a new antidote for that dreadful poison the oxy-muriate of mercury. We have not yet seen it, but there is a very full analysis of it by A. Cattaneo, in Omodei's Annals, minutely describing the origin of the discovery; the mode of preparing and administering the gluten, in which there seems to be nothing peculiar; experiments with it on animals; and a comparison of its efficacy with that of albumen, as proposed by Orfila. Taddei concludes his pamphlet with recommending the now almost disused corrosive sublimate in syphilis, care being taken to modify its effects by drinking largely of milk, barley water, and decoction of mallows, or burdock.—*Annali. Univ. di Medicina,* vol. XVII.

Physiology of the Rice Bird, Emberiza Oryzivora.

It was formerly supposed that only the female Rice bird was migratory in the same way as Linnaeus supposed the male chaffinch (*Fringilla Coelebs*) to migrate alone from Sweden. The mistake was first detected by Mr. Bartram, and afterwards confirmed by Mr. Alexander Wilson, (*American Ornithology*, II. 51.) in respect to the Rice bird; and we recommend to the Swedish Naturalists a more careful research in the case of the chaffinch. The truth is, that the internal organization of wild birds, of all kinds, undergoes a remarkable change every spring and summer. In autumn the parts in the Rice bird which characterize the male, are no larger than the smallest pin's head, and in young birds of the first year can scarcely be detected at all, whereas in spring they become at least a hundred times larger. In the Rice bird Mr. Wilson ascertained these facts by numerous dissections. The plumage changes at the same time, so that in winter all the birds

appear to be females. It is another great mistake in the history oft his bird, that it has only become migratory since the plantation of rice in the United States, for it migrates many hundred miles beyond the rice plantations.

Shetland Cure of Phthisis by Incantation.

WHEN people are afflicted with consumptive complaints in Zetland, they imagine that the heart of the person so affected has been wasted away by enchantment. Old women, and sometimes men, profess to cure this disease by the following curious and very ridiculous operation:—The party is set upon the bottom of a large cooking pot, turned upon its mouth; a large pewter dish is placed, or held upon his head; and upon it a bason is set nearly full of cold water; into which, the operator pours melted lead through the teeth of a comb. All this is performed with many strange incantations and gesticulations. If the lead falls into a shapeless lump, they declare that the heart and the lungs of the patient are completely wasted away, that they will have infinite trouble, and perhaps, after all, will not be able to bring them back to their natural and healthful form. The lead is repeatedly melted, and poured through the comb into the water; and every time it is asserted to be more and more like the natural heart and lungs, and the bewitchment, of course, is rendered weaker and weaker. The patient undergoes this three times, with some days between each operation. When the last cast of the lead is over, the operator shews it round, and points out how exactly every part of the heart and the lungs are restored to their natural and proper shape; if the patient dies, (perhaps his death is hurried on by the fatigue and agitation occasioned by this mummery) his death is ascribed to some oversight in the strict performance of all the relative parts of this casting of the heart. The moon must be at a certain age, and it must be performed at a certain turning of the tide and hour of the night; and numberless other things must be attended to. The operator will take any thing they please to give, if it should be the half of all their goods and chattels, but he must not touch money, otherwise his trouble would come to nought, and the spell which bound the patient would be firmer than ever. The patient must wear the lead, which has been used, in his bosom, for sometime after the operation.—*Hibbert's Shetland Isles. and the Pirate, by the Author of Waverly.*

Spurzheimism.

We copy the rollowing notice from a hand-bill, as a strong illustration of zeal for system:—

"LECTURES on the Phrenology and the Anatomy of the Brain, by Dr. Spurzheim.

The system of Phrenology is founded in the immutable laws of nature. The silent, but steady progress which, for the last three or four years, it has been making in this country, has induced many of its supporters to conceive, that nothing more is wanting to secure the assent of every unprejudiced mind, than a fair and public demonstration of the facts upon which it is founded.

In order, therefore, to the accomplishment of this object, it is proposed to invite Dr. Spurzheim over to this country, to deliver two Courses of Lectures upon Phrenology in London, one at each end of the town, and at the same time to demonstrate the Anatomy of the Brain.

No direct application has yet been made to Dr. Spurzheim, nor is such an application intended, unless a class can be formed sufficiently numerous to sanction such a request.

It has been proposed, that the subscription be Two Guineas for each Course; and, accordingly, Tickets of Admission are prepared, and may be had of Mr. De Ville, 367, Strand; who, on the event of not obtaining an adequate number of

Subscribers, or of Dr. Spurzheim not being able to leave his practice at Paris will return the money to every Subscriber, or to the bearer of his Ticket.

The following Gentlemen have undertaken to correspond with Dr. Spurzheim on the subject, so soon as the Subscribers shall have become sufficiently numerous:

Dr. Buchan, Pimlico; Dr. Elliotson, Grafton-street, Bond-street; Dr. Powell, Bedford-place; Mr. Bramah, Pimlico; Mr. Donkin, Grange-road, Bermondsey."

Mr. De Ville, we should suppose, has something more solid in view than obtainiug from the Lectures a knowledge of the system; as it is to be noted that he *sells* Paris Plaster Heads, accurately numbered.

Annals of Name-coining and Medical Style.

WE propose to give under this article a list of the new coined terms, and the very learned expressions which we meet with in our reading, and which we think are so injurious to the simplicity of genuine science, that they deserve the severest animadversion. One thing is certain, that they almost uniformly proceed from an inferior source. We can scarcely recollect an instance of any of the great men who have given celebrity and dignity to the profession, having set themselves to the finical task of compounding a multitude of new words from their Greek Lexicons. To avoid the appearance of invidiousness or severity, we shall not give the names of the authors, and we think it would be idle to explain the terms themselves.

Prosophalgia	Phtharmata	Aluropsis
Arthopuosis	Semeiology	Insufflation
Autalgia	Apocenosis	Synizezis
Hyperœsthesia	Mazology	Retropulsion
Anœsthesia	Embryulcia	Erubescence
Paratrepsis	Putrisolution	Aëroëidic
Pareccrisis	Keratonyxis	Scotomata
Paramorphia	Mercurialize	Necrosomatoscopy
Parrhæmasia	Pupillary aperture	Dacryocystalgia caco-
Phymata	Hygienic	chymica

The French instrument for examining the state of the thorax by the sound, has been successively called *sonometre*, *pectoriloque*, *thoraciloque*, and *stethoscope!* The Arabians are said to have a hundred names for a horse: we think our scientific language bids fair, at this rate of innovation, to excel them far in the character of useless copiousness.

We quote the following sentence, and a defence of it, and leave our readers to determine its force: "vision may be *hemioptic*, *ateloptic*, *myosdesoptic*, *photoptic*, *photophobic*, *oxyopic*, *nephodic*, *diplopic*, *chruptic*, *strabismal*, or *luscitant*." "We have not been betrayed," says the writer, "into the use of these, and other appellatives [epithets] by the unworthy influence of affectation or pedantry: our paramount object at all times is, to diffuse the greatest proportion of useful knowledge in the fewest words, and the smallest possible space."

An American Professor, writing on Medical Sympathy, says, "The words of the orator strike the ear, and electrify the heart; but have no affinity for the grossness of the humours." "Nothing passes from the speaker to the hearer, but the contagion of the soul." "It is in the magical web of mental sympathy, that Homer and Dante, and Milton and Byron, entangle so indissolubly the souls of their readers, and drag them in triumph at the chariot-wheels of their genius"!—"Terror convulses and shatters the frame with the force of an earthquake." We add, in his own words—"Granted, if you please, for the sake of argument, but not as an offering at the shrine of truth."—What injury must such bombastic nonsense do to the pupils of Transylvania University, not only in corrupting their taste, but in obscuring the statement of medical facts, in the "lectures and teachings" of this romancing professor.

Critical Characteristics of New Books.

I. *Medico-Chirurgical Transactions.*

Published by the Medical and Chirurgical Society of London. Vol. II. pt. 2. 1821.

It has been whispered.—and the whisper has reached the press, (*Med. Chir. Rev.* II. 865.) that the value and interest of the Transactions of this Society are diminishing; and that while the Society itself is rising in numbers and in respectability, the communications are sinking to inferiority. Now, all this is indeed strange; and contrary, we should imagine, to every rule of sound logic and just inference. The deterioration is traced to a natural principle of decline—a *lapsus senilis*,—towards which all human institutions have an irresistable bias to fall. It would indeed be unfair to imagine, that this society, useful as it is, and respectable as it is, should have any just claim to exemption from that impending destruction which terminates in " the wreck of nations and the crush of worlds." But granting for a moment, the fact of the inferiority of the more recent papers, we should scarcely be disposed to account for it, from so hypothetical and far-fetched a principle, as the *natural decline of all things*, particularly as the society is not of more than twenty years standing. Would it not be equally rational and true, to refer it to some *ratio of decrease among diseases*, or still more justly to the *natural improvement of the art of medicine and surgery*, and particularly to the improved knowledge of the *members* of this society; so that what a few years ago appeared in the transactions as ingenious and novel in treatment and in operation, is now well known to the youngest members. Since its establishment, indeed, recent as it is, the improvements of Medicine and Surgery have been so great, and so numerous, that in many cases we may safely affirm, they are as perfect as it is well possible for human skill to render them, and of course we ought not, perhaps, to expect so much novelty and interest as we could justly have done no long time ago.

Such would be our account of the inferiority, did it unequivocally exist; but we may fairly question the fact, and call for the test by which we are to decide, even after we have made a careful comparison of the recent and the earlier numbers. If the *celebrity of names* is to decide the question, we cannot make a fair estimate of this celebrity; for many of the gentlemen who contributed papers to the earlier numbers, though they have now risen to merited distinction, were then but beginning to be known to fame; and we have every reason to believe that the present *junior contributors*, whose papers are under-valued, because they are in some measure juvenile, will occupy a very different rank in professional fame ten or twenty years hence, from what they do at present. Dr. Baillie and Sir Astley Cooper were once as little known as the last enrolled licentiate. If *interest* is to be made the test of the papers,—who is to measure the amount of this interest? We appeal from the judgment of the *superiores* of the profession, for to them little can be interesting or novel. The junior members are certainly the best judges of the quality of interest; while the senior members are indisputably the best judges of accuracy and truth.

Balancing, then, the opinions of these two classes, so far as we have been able to ascertain them, and avoiding impracticable comparisons with former volumes, we conclude, that the papers in this volume are well worthy of perusal. Those who cannot go to the expense of the volume, will find a pretty full and useful abstract of it in Dr. Johnson's Journal, *ut supra*, to which we refer, as it is rather too far back for us to make an extended analysis of it. We have only room to add the names of the several contributors—Mr. A. P. C. Hutchison, Dr. George Gregory, Mr. D. Price, Mr. H. Coates, Mr. P. Breton, Mr. J. Swan, Mr. J. Dunn, Sir Astley Cooper, Mr. R. Welbank, Mr. M. A. Brumester, Mr. P. N. Scott, Mr. E. Salmon, Mr. P. M. Martineau, Mr. W. Porter, Dr. W. Russel, and M. Breschet.

II. *Lectures on the Structure and Physiology of the Male Urinary and Genital Organs of the Human Body; and on the Nature and Treatment of their Diseases. By James Wilson, F. R. S. &c. &c.* 8vo. 1821. 14s.

THIS work consists of fifteen lectures delivered before the Royal College of Surgeons in the summer of 1821, on the properties of urine in health and disease, with remarks on the kidneys; on the semen, scrotum, spermatic chord, and testicles; on the vesiculæ seminales, the prostate and Cowpers glands; on the structure of the penis; on calculi; on gravel; on retention of urine; on strictures of the urethra; on inflammation of the testicles; and on impotency. The information which Mr. Wilson has collected appears to be accurate and useful; and the style is much more perspicuous and logical than we should have been led to suppose from the inconsecutive arrangement of the subjects. The work is chiefly useful as a manual to the student; the experienced practitioner will not find in it much that he does not already know. Mr. Wilson was a very respectable lecturer and much esteemed.

III. *An Essay on the Medical Application of Electricity and Galvanism, with a concise Descriptive Account of Diseases. By James Price, Member of the Royal College of Surgeons,* 8vo. London, 1821. 6s. 6d.

THE mention of electricity is now almost enough to bring upon a surgeon the suspicion of quackery; yet we pledge ourselves that there is no appearance of this in Mr. Price's little book, which is sensible, and very much to the purpose. Electricity has at present, indeed, fallen undeservedly into neglect. The truth is, that too much was at first expected from it; and because it did not quite come up to expectations extravagantly formed, it was all at once abandoned. (See page 125 above.) Mr. Price's book is well calculated to show what it can and what it can not do, and well deserves a perusal.

IV. *Advice to a Young Mother, &c.* 12mo. 3s. 6d. *The Parent's Medical and Surgical Assistant, by T. A. Bromhead, M.D.,* 12mo. 4s. *Medicina Clerica, or Hints to the Clergy,* post 8vo., 4s. *Journal of Popular Medicine, by C. Haden,* 2 vols. 8vo.

THESE, and some other little works of the same sort, we shall take an early opportunity of noticing at some length, as we are persuaded they have, in more ways than one, a greater influence on professional avocations than many seem to be aware of. It will at least be useful to let our professional readers know what is in the books, should they, as they undoubtedly will, be sometimes asked their opinion of their merits.

V. *Outlines of Midwifery, developing its Principles and Practice; intended as a Text-book for Students and Junior Practitioners. By J. T. Conquest, M.D. F.L.S. &c. &c.,* 8vo, pp. 212, with 12 Plates, 2d Edition. London, 1821. 7s. 6d.

WE give the character of this useful little work when we say it is strictly laconic. It is, indeed, a clear and comprehensive, though a very brief collection of every thing of moment which the young practitioner ought to know. The convenient size of the book, also, renders it a very portable companion in the earlier career of practice. The plates, which give a very just notion of the several positions of the fœtus in natural and in difficult labours, seem to be accurate, and supply the want, which most students have felt, in some of the more expensive books on the

subject. The rapid sale of the first edition proved most amply that such a manual was much wanted.

We are happy to see the new edition so much improved. Several pages on the diseases of the puerperal state are added, and copper-plate engravings are substituted for the lithographic ones.

Before, however, we part with Dr. Conquest, we wish to give him a few words of friendly advice. We hope he will, in future, avoid that affected style which pervades the work, (the ill-natured call it *cant*); and also that he will omit in his next edition those pages in which he exhibits what he is pleased to term his "mournful series of portraits, every one of which is drawn from a living character." (Outlines, pp. 76, and see.) Such personalities are often more injurious than when the individuals are openly named, for they may be applied to many individuals for whom they were never intended, and to whom they are not applicable. Dr. Conquest would certainly improve his useful little work by expunging this in future editions.

VI. *A Treatise on the Nature and Treatment of Scrophula, &c. &c. By E. A. Lloyd, Member of the Royal College of Surgeons, &c.* pp. 230, 8vo. London, 1821. 9s.

IN the article JOINTS, in the new edition of his Surgical Dictionary, Mr. Cooper says, that this work "deserves attentive perusal," and we cordially agree with him. On the joints in particular, Mr. Lloyd displays a knowledge of his subject, which does great credit to his observation and his judgment as a surgeon. His treatise, however, though largely occupied in considering scrophulous diseases of the joints, is also full and comprehensive on all the phenomena of scrophula, in whatever part, or whatever tissue of the body they are met with. The subject of scrophula may by some be thought to be exhausted; it appears, on the contrary, to be only beginning to be studied on the inductive and philosophical principles, which Mr. Lloyd so successfully pursues.

VII. T*he Medical Practitioner's Pocket Companion.* 12mo. London, 1822. pp. 68. 2s. 6d.

WE should not have noticed this insignificant publication, did we not fear some of our young friends may be taken in by the alluring title with which it is baited. We subjoin two or three specimens of the work, and leave them to form their own judgment of its merits:—

"Diarrhœa, coming on suddenly. D. [indicates] schirrhous testicle.

"Eyes, sense of heat in. D. [indicates] eating muscles, or something injurious.

"Face, flushed, [e. g. in blushing.] D. [indicates] yellow fever.

"Skin, clammy, [e. g. on getting out of bed in a morning.] D. [indicates] abscess of the hip joint.

"Yawnings, frequent, [e. g. in attending a tedious labour.] D. [indicates] nervous fever.

"Sweating, breaking out on the temples, [e. g. after waltzing.] D. [indicates] hydrophobia."—Dens omen avertat!"

We scarcely recollect of ever having before encountered so much nonsense in so short a compass. We could give a hundred instances from the work of similar absurdity and ignorance. We wonder as much at its having been published, as at its having been written.

VIII.—*An Essay on the Effects of the Fucus Helminthocorton upon Cancer, &c. By William Farr, M. R. C. S. &c.* Pp. xii. 112, with a coloured engraving. 8vo. London, 1822. Price 5s. 6d.

This medicine, well known on the continent as a vermifuge, Mr. Farr has tried

in the dispersion of cancerous tumours. He gives it in decoction or infusion, beginning in the proportion of half an ounce to a pint of boiling water,—a wine-glassful to be taken thrice a-day,—increasing or diminishing the dose as the case indicates. He occasionally combines it with rhubarb and other aperients. From the success which he has met with in the cases in which he has tried it, he is very sanguine that it will prove a valuable medicine in cancer. Whether his expectations will be fulfilled, it is not for us to decide; for it will require additional testimony in its favour before its efficacy can be permanently established. Prussic acid, and croton oil, although they have been already tried to considerable extent, by many able practitioners, and often with success, are still far from being established medicines. Mr. Farr has not, that we observe, given any case of failure with the helminthocorton; though such must, without doubt, sometimes occur with this, as with all other medicines.

XI. *Reflections on Gall and Spurzheim's System of Physiology and Phrenology; addressed to the Court of Assistants of the Royal College of Surgeons in London, in June*, 1821. *By John Abernethy, F. R. S. &c.* Pp. 75. 8vo. London, 1821. Price 3s.

We need not expatiate on Mr. Abernethy's super-eminent talents as a surgeon, and, we might add, as a physician, although he has not the title. The improvements which his genius has introduced, will always illustrate the annals of English medicine. His success as a teacher has also been very distinguished, and seems, if we may judge from the annual increase of his pupils, to be progressively increasing, in proportion as he advances in years. On all these considerations, we are rather sorry to find him venturing somewhat out of his line of study, and deciding questions of theory and abstruse speculation as if they were plain and palpable facts. In a word, he is a convert to what we take the liberty to call *Spurzheimism*, rather than adopt the Greek coinages of its advocates; for surely Dr. Spurzheim has as good a right to have his name incorporated with his peculiar researches as Galvani or Volta; and though Dr. Gall was the founder of the theory, Spurzheim has clearly done the most to build it up into a system.

In the truth of Dr. Spurzheim's views we do not believe,

1. Because all his organs, or faculties, are placed on the surface or external part of the brain, and none of them in the interior. What, therefore, is the use of the inner parts of the brain?

2. Because there are no inequalities, such as he describes, on the surface of any brain when dissected, and the inequalities are uniformly confined to the cranium.

3. The brain is not only uniform in *level*, if we dare use this expression for a convex surface, but it is uniform in structure,—which ought not surely to be the case in the different organs; for the organs of destruction, and of veneration, and of music, ought, we think, to differ as much in structure as the hand, the eye, and the ear. Dr. Spurzheim ought, on his principles, to be able to point out the different organs, from their structure alone, were they all cut out of the brain and laid on a table. This he could not do, though he could, in this case, at once distinguish an eye from an ear.

4. A faculty, such as that of destruction, when subdued, and rendered dormant, by the efforts of other faculties, is not accompanied, we believe, by any diminution of the protuberance of the organ.

5. The supposed protuberances could not be formed from corresponding protuberances of the brain in numbers 20, 23, and 29, as they are quite disjointed from it by intervening bone, &c.

6. The inductions of the theorists are too scanty; for, like a quack medicine, that cures one and kills a thousand, the successful examples are brought forward, and the unsuccessful overlooked, or kept in the back-ground.

7. When a puzzling case occurs, such as the organ of destructiveness being strong in a man of gentle disposition, the theorists evade the objection by shuffling off to some counteracting organ, which they would never have thought of but for the objection.

8. The system, *notwithstanding the express denial of its advocates*, is clearly built upon materialism, for it identifies the dispositions of the mind with animal appetites. Dr. Spurzheim, for example, gives the case of a woman who declared on oath, that she had an illegitimate child for the sole purpose of gratifying her brain appetite of destruction, by murdering it as soon as it was born. If this be human nature, we renounce all fellowship with it.

9. The system, (though this also its advocates deny), supports the most diabolical features of fatalism, and the immoral doctrines of the German novelists,---exemplified so strongly in Werter, the Robbers, and the Stranger,---that the passion sare natural and heaven-born, and ought to be obeyed at the expense of all consequences to social order.

10. Even if the system were true, it is most justly remarked by Mr. Abernethy, and it is the best thing in his book, that its prevalence would be most injurious to society. We have seen, ourselves, some of these bad effects. We once knew a lad accused of a theft, of which he was innocent, because he happened to have a certain bump on his head; and we know several families who will not hire a servant before the head has undergone the scrutiny of the mistress; and several merchants who look sharply after the heads of those with whom they have transactions. If this was to go on, and spread through the land, universal distrust would be the consequence, and the system would have to be suppressed by law, as was, at its origin, wisely done at Vienna.

We are exceedingly surprised to meet with the following sentence from Mr. Abernethy :—"The researches of science seem to have confirmed the conjectures of Hartley relative to the functions of the nervous system, and shewn that there is a subtile substance, which he called æther, occasioning vibrations in the nervous fibrils, and thus exciting sensation and communicating volition. These vibrations may recur as miniature vibrations in the brain, and reproduce sensations, and also imagination and thought."—(Page 62.) Now, to say nothing of the gross materialism here declared of a substance occasioning thought, we ask Mr. Abernethy by what researches of science the existence of this conjectured subtile substance has been shewn or proved? If it has been proved, it is more than we can learn, except from this passage, and we will neither take Hartley's conjecture nor Mr. Abernethy's assertion for the proof of it. We must have a description of its specific gravity, or of its tangibility, or some such quality, before we can allow its existence, much less its effects of producing thought and volition. Every body, indeed, who has studied the subject, knows that Hartley's æther, as well as his vibratiuncles, have been long exploded from science; and what grounds Mr. Abernethy can have for saying they are proved, we cannot dlvine The only part of Hartley's doctrine, which is now looked upon to be correct, is his account of association, so far as it is not involved in his unproved and improbable vibrations and vibratiuncles of the nerves. Were it proved that the nerves vibrate, which it is not, we would be as far from accounting for the phenomena as before. We repeat, that we are sorry this very distinguished author and eminent surgeon should have undertaken to advocate doctrines so untenable, and, according to his own express confession, so dangerous to virtue and social order. Were this confession not most clear aud unequivocal,, we could scarcely have credited that it could have proceeded from an advocate of Spurzheimism.

THE

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OF

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1822.

THE EDITOR'S WAYS AND MEANS.

TO CORRESPONDENTS.

Sir Gilbert Blane is right. We have attended to his note, and stand corrected. We are aware, indeed, that critics are frequently more ignorant and stupid than envious or malignant; and in our future decisions in Appeal Causes shall bear this in mind.

A friend asks us whether we think it possible for wit to become purulent, and refers us, for what he conceives to be a case, to Dr. Johnson's Journal, No. 9, p. 223, where we are told that a young gentleman, on reading our arguments against the existence of matter and spirit, observed to a brother student, that, "as for the existence of *spirit*, he could not say; but if the learned Editor [of the Foreign Journal] had been at St. George's Hospital that morning, he would have seen nearly a pint of *matter* discharged by Mr. Gunning from a large abscess" We should recommend to so hopeful a youth to *steatome* (stay at home)—see *Med. Chirurg. Rev.* No. 8. p. 736—and experiment upon the distinctions between pus and matter, as more profitable than making bad puns, to expose his own dullness.

Our Correspondent who requests information respecting the virility of eunuchs, we refer to Frank, who says—"Absque testibus, semen eunuchi habeant," (*De Curand. Hom. Morb.* vi. p. 338); and Spurzheim, who states what we have repeatedly observed, even in infancy, that "in pueris veneris stimulus semenis secretioni sæpe antecedit. Plures eunuchi, quanquam testibus privati, hanc inclinationem conservant. Sunt etiam fœminæ quæ, sine utero natæ, hunc stimulum manifestant,"—(*Physiogn. Syst.* p. 278, *note.*) The gentleman to whom he referred us says he never remembers facts which are told over a bottle.

An anonymous Correspondent proves, to his own satisfaction, that we are Atheists, thus:—"Does any philosopher, Dugald Stewart or Dr. Brown, for instance, pretend that they know anything of the nature or *essence* of Spirit? of its being extended or unextended? of its occupying or not occupying space? of its length, breadth, or thickness?—But the essayist infers, that these are necessary to be known, to prove the existence of Spirit; and as these cannot be known, Spirit therefore does not exist. By this mode of reasoning, he must deny the existence of a Deity. Can we know anything of the *essence* of that Being we call God? Can we comprehend his omniscience, his omnipresence, his omnipotence, or his omnipresence? No; *ergo*, God does not exist." We have only to refer to pp. 98; 259; 262; 264; and 265, above, to shew how much our views have been perverted. We expressly deny the existence of what he calls *essence*, and yet he says we insist upon this being proved.

A Recluse says we have only combated the obsolete doctrines of Aristotle and the schools; which proves that he has never been at any of the Universities; as these doctrines are still the only ones taught there.

We have received a very pressing petition from the pronoun It, begging that we would interpose our authority to prevent the said *it* from having its legitimate place usurped in medical writings by the unlawful intrusion of THAT and THIS, who have in pay a whole host of mercenary nouns, to keep IT from its legal rights. Amongst a thousand instances of the usurpation complained of, we find that the brain is called "that viscus;" the colon, "that bowel;" the aorta, "this tube;" the femur, "that bone;" the arm, "this member;" oxygen, "that gaseous body;" opium, "that medicinal" &c., in all of which cases, and innumerable others of the same kind, the said IT maintains that *it* alone is and should be used in all classical works in the English language, and that all innovations of this sort are corruptions of style not to be tolerated.—We think the petitioner is right, and shall endeavour to correct the abuse, both in ourselves and in those who come before our tribunal.

A pupil of Mr. Abernethy's is in great wrath at our irresistible proof that Mr. A. is an advocate for materialism; but we are not in any way answerable for the consequences, as we quoted the passage verbatim from his book. (*See our Number for April, p.* 322.)

M. tells us that "to define is to prevent or shorten controversy," and we know it is usually said so by Aristotelians, though it agrees not with our observation, for we have always seen it the very reverse; and we like not to speak on hearsay, but from what we know. He also complains of our reprobating the use of the terms organism, function, impulse, &c., and goes on to inform us, that "the function of the liver is to secrete bile, &c.;" though if he had read attentively, he would have seen that it was not the *use*, but the *abuse* of these terms which we opposed. M. would therefore do well to read before he criticises, and to correct his own mistakes before he again ventures to correct ours. It is exceedingly amusing to see a man thus gravely illustrating his own misconceptions.

To our zealous and steady contributors, we shall take an early opportunity to write.

BOOKS AND PAPERS.

WE have received a number of communications, which we have disposed of according to the wishes of their respective authors.

We have not left space to mention the numerous foreign publications which have recently been sent to us for review, besides those mentioned in our last. Of new British works, there is rather a scarcity at present, but a great number are in the press, just ready to appear, and will receive an early notice in our next.

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On Sanguineous, Adipose, and Heterogeneous Retentions, by John Peter Frank.*

As this volume is of the highest practical utility, we shall beg leave to encroach a little on the space which we usually allot for variety, in order to give as full a detail as we can of the practice of this distinguished physician in the important diseases which he has classed under Retentions. This part of the work embraces *amenorrhœa; retention of the lochia; ischæmia nasalis* and *hæmorrhoidalis; corpulence; worms; hepatic retentions—jaundice, gall stones;* and *urinary calculi.* We shall begin our abstract with a disease which so often baffles the most skilful practice, and which Frank has very fully investigated. As we go on, we shall add illustrations from our own resources, and references to authors, which Frank usually omits,—for what reason we do not know.

Amenorrhœa.

This is the first disease in his order of sanguineous retentions, and is made to comprehend not only total suppression of the menstrual discharge, but delay in its appearance, diminution of its quantity, or morbid alteration of its colour. The menses, though almost universally the sign of puberty and capability of conception, are not always so; for many cases are

* De Curandis Hominum Morbis Epitome, prælectionibus Academicis dicata. Auctore Joanne Petro Frank, &c. &c. Tom. VI. Lib. vi. De Retentionibus, Pars. III. 8vo. pp. 430. Viennæ, 1821. Price 16s.

on record, of females in which the discharge has never appeared, and yet they became happy mothers. Frank had under his own care, a woman who had three healthy children, and yet had never had either catamenia or lochia. The usual absence of the menses during pregnancy and lactation, he does not consider as a diseased retention; and caused in the former case not by the transference of blood to the fœtus, but by the occupation and compression of the inner surface of the uterus; and in the latter, by the substituted secretion of milk.

To the first species, which we should call AMENORRHŒA VIRGINUM, he gives the uncouth name of *amenorrhœa tiruncularum*, perhaps from the appellation given by Columella (*De Re Rustica*, VII. 12.) to a young bitch which has not had whelps! The first symptoms of the appearance of the menses, are pains in the loins and pelvis; feebleness of the limbs; head-ache; glistening of the eyes; pimples about the face, breast, and shoulders; quick pulse; enlargement and tension of the breasts; lassitude; greater sensibility of mind; sometimes colic pains; and the discharge of a whitish serum from the vagina. In some cases, the skin assumes a waxy look; the face, and particularly the eyelids in the morning, appear swoln and turbid; difficulty of breathing from slight exertion; love of solitude; sadness; tendency to weep; incubus; watery, or turbid urine; coldness of the extremities; vertigo; ringing in the ears; epistaxis; painful tension of the ligamentum nuchæ; and tendency to syncope and sinking in churches and other public places, particularly in the erect position.

In some cases of suppressed menstruation, tumours arise periodically in the arm, and either burst and discharge blood, or gradually subside and disappear. In some girls, long before the menses appear, the vena saphæna in one foot only, near the malleolus, swells, and becomes red and very painful every month, and quietly subsides again to its natural size and colour. Not rarely, periodical hæmorrhage takes place from the eyes, the nose, the ears, the lungs, the stomach, the intestines, the nipples, the tips of the fingers, &c. without any apparent rupture of the vessels;—or periodical secretions of the mucous or serous kind, occur in various places of the system. As these symptoms become more aggravated, they assume the form of a serious disease, which, from the usual greenish yellow tinge of the skin, has been long known under the name of *chlorosis;* but this, as well as the names of the *white fever*, and the *love fever*, are no less inappropriate and apt to mislead, than referring it, as is often done, to the class of cachectic diseases. The truth is, that this colour of the skin, and many of the other symptoms, are often

found quite unconnected with uterine affections, in young girls, and even infants, as well as in men of sedentary habits. The same correct views are given by Dr. M. Hall, in his Essay on the Mimoses. The uniform cachectic nature of the disease is also disproved, by its occurring in those of plethoric and robust habits with firm fibres and florid complexion,—which shews, that in such cases, it originates in *oppression*, rather than *suppression*, of the vital energies.

In amenorrhœa, as in all other diseases, the first step towards the cure is the discovery of the true CAUSE, and its prompt removal. As in reasoning on other phenomena of nature, we are apt to confound effects with causes, so also in accounting for the phenomena of menstruation from the superabundance of blood, the tortuous course of the uterine arteries, the strength of the veins, local plethora, and the like. We make the same confusion of cause and effect, when we say, that the menses cease in old age from the increasing rigidity or callosity of the uterus. From the earliest period of Grecian medicine, it has been known, that hæmorrhage, venæsection, copious perspiration, ptyalism, vomiting, diarrhœa, or any other discharge; or cutaneous eruptions, and all violent diseases, are often attended with amenorrhœa. This has been accounted for by debility, or by the vicarious consumption of superfluous blood; but Frank is inclined to ascribe it to the less mechanical cause of a change thus induced in the periodic condition of the uterus, though his ideas of the nature of this change seem to be far from perspicuous.

Among other CAUSES of the disease, he mentions sudden emotions of anger, fear, terror, grief,—perhaps he might also have added joy. *The shame and blushing attending the first discovery of the discharge, when the mother has not been careful to mention it, and when it is unfeelingly pointed out with scorn by others, not unfrequently tend to check and suppress it, and produce serious consequences.* He gives the CASE of a noble virgin, who was on this account rudely assailed on going down stairs from a ball, and who was, in consequence, siezed with inflammation of the uterus, which proved fatal in a few days. He justly ascribes the frequent occurrence of amenorrhœa in cities, to the prevalence of sedentary effeminate habits; fine sentiment; novel reading; the use of acids, to give a delicate tint to the skin, and diminish corpulence and ruddiness; to the indulging in large quantities of food, and debilitating beverage; and to the absurdities of tight thin dresses.

He mentions in detail, the evils arising from the use of CLOTHS, napkins, and bands, to receive and conceal the discharge. It is a European practice, originating in the abolition of the super-

stitious notions concerning the effects of the menses, and in the freedom allowed to European females of mixing in society and parties of pleasure, while menstruating. In order to conceal their state, they put a tight bandage over the pudenda, which confines the discharge not only to the vagina, but often to the uterus itself, with the worst consequences, particularly in hot weather. In winter again, the frequent removal of the bandage for natural purposes, injuriously exposes the parts to the cold air. The terrible effects of cold thus applied, he illustrates by the CASE of a girl, who bathed herself with cold water to stop the menses, at a time when she expected her lover. She died in a short time of inflammation of the uterus. The same effect is also often produced by coition, either immediately after the cessation of the discharge, or before it has quite ceased. At such times, women have more desire, but in consequence of this very state of excited feeling (amounting sometimes to nymphomania, itself a species of inflammatory action), is the uterus more prone to violent and fatal inflammation, of which our author has often seen examples.

In every case of a menorrhœa, the practitioner ought, before trying any means of CURE, to ascertain whether there may not be pregnancy, either concealed or unsuspected by the patient, as otherwise he may do much harm. He ought also to learn whether the attack has been sudden or slow; and whether it seems to arise from defect of secretion or of excretion. Care must be taken not to treat the first menses with astringents, under the mistake that it is leucorrhœa; but to keep the patient free both from much cold or much heat. To *prohibit bandages*, and recommend the recumbent posture, with light simple diet. Should the patient be plethoric or robust, or the disease what he calls *hypersthenic*, the treatment must be depletory and antiphlogistic; and care must be taken, that the revulsion of blood from the uterus to some other part, as is often the case, do not produce hæmoptysis, amaurosis, or the like. Leeches applied to the vulva or anus have been recommended; but are not always sufficient, without previous venæsection. The effect of spontaneous epistaxis, when amenorrhœa is accompanied with severe head-ache, confirms the utility of bleeding. Frank also advises Haller's acid elixir, emollient fomentations and clysters, the tepid hip-bath, and the steam of water directed to the genitals.—(See *Quart. Journ. For. Med.* IV. 136.)

When amenorrhœa occurs from DEBILITY, the very opposite course must be taken. We may usually in such cases presume the existence of saburræ, or other obstructions in the primæ viæ, which must be promptly evacuated in the mildest way we can.

Stimulants and tonics must be avoided, and antispasmodics and light bitters given, such as musk, valerian, and chamomile. *General bleeding must not be attempted,* but leeches may be applied with advantage to the labia vulvæ. In the greater number of cases, marriage will prove the most natural and speedy cure; for all the efforts of medicine will sometimes be ineffectual to prevent nymphomania, tedium vitæ, melancholy, or madness. With the exception of the extract of black hellebore, he reprehends emenagogues, and the rash practice of compressing the femoral arteries. In the rest of his practice he follows up the same judicious principles; and we have seen Mr. Clarke (*Quart. Journ. For. Med.* IV. 118.) entirely coincide with him in adopting a similar method of treatment.

ORGANIC AMENORRHŒA will usually require surgical aid, and care should always be taken to examine whether any organic or mechanical obstruction exist, before any means of general treatment be resolved upon. In *amenorrhœa senescentium,* Frank reprobates the indiscriminate practice of bleeding, so often resorted to, and judiciously advises the methods already explained, which are adapted to the existing diathesis of strength or debility in the patient.

Retention of the Lochia.

The practice recommended in this disease is equally excellent. The cause of the lochial discharge is no less obscure than that of the menses; for both are peculiar to the human female, and not found in brute animals, though in these, gestation and parturition are in other respects similar. In some rare instances, both the menses and lochia are wanting, though the mother seems otherwise in good health. (*Ephemerid. N.C.* and *Ratio Instit. Clin. Ticinens.*) When suppression takes place, it may be caused by the position of the body placing the uterus obliquely; by a clot of blood, or a portion of the placenta obstructing the os uteri; by procidentia uteri; by fæces distending the rectum and compressing the vagina; by the abdominal bandage being too tight; by tumours, hernia, or inflammation; by strong or unpleasant odours, as of roses, lilies, musk, lime-water, &c. by all violent emotions; by cold or astringent injections employed to suppress hæmorrhage; by unaired linen in changing the clothes; or by cold air. Under the fear of atmospheric contagion, ventilators were constructed in 1784 in the hospitals of Vienna, and produced the worst effects of this kind among puerperal women, till a better system was adopted.

The SYMPTOMS are admirably described by Hippocrates, though it is singular that he omits cuticular eruptions, (See *Act. Hafniens.*)

and the effect of the suppression in often producing peritonitis, apoplexy, paralysis, and hæmorrhage, in various parts. The latter, however, is rare, for Frank had never seen a case of it during fifty-four years' practice, while he frequently observed it in amenorrhœa. The common symptoms are intumescence, tension, and pain of the hypogastric region extending to the loins and joints; whole body painful to the touch; navel livid, flushing of the face, difficulty of breathing, swimming of the eyes, vomiting, rigours, fever, deliquium animi, and convulsions.

In attempting a CURE, we ought *never to consider the mere disappearance of the discharge as a disease, unless other distressing symptoms are present;* and to be cautious not to confound effects with causes. Yet, it is not uncommon, to see stimulants employed to restore the discharge, though the suppression is caused by inflammation of the uterus, or by mechanical obstruction. Opium ought to be avoided as a deadly poison, where there is the least inflammatory diathesis; and in other cases cautiously combined, with ether or volatile alcali. Venæsection must also be used with caution, though leeches applied to the labia vulvæ, and cupping, blisters, and frictions to the inside of the thighs, will be useful. When the suppression arises from cold having been applied to the parts to allay hæmorrhage, tepid vapour and fomentations, will be of advantage; and the approach of inflammation of the uterus, may be foreseen by these producing internal heat, tension, and unpleasant feeling of fulness, and pain in the abdomen and uterus.

Ischæmia nasalis, or suppressed Epistaxis.

Some may think it too nice a distinction, to consider this as a separate disease; but Frank was a practical man, and not a closet nosologist, and he found it useful in his practice to adopt the following views:—We cannot tell why it is, that during boy-hood and old age, epistaxis is frequent; while in infancy and adolescence, it is rare, except as a critical symptom in inflammatory fever. Whatever may be the reason of this, we know, that hæmorrhage from the nose, may occur so often as to become habitual, and wherever it does so, its suppression will often be injurious, if not dangerous. The CAUSES may usually be traced to repletion of the nasal vessels, to cold, to snuff taking, to polypus, to cicatrices, amenorrhæa, ischæmia hæmorrhoidalis, &c. The consequences may be apoplexy, palsy, epilepsy, mania, amaurosis, convulsions, or hæmorrhage from the lungs.

The SYMPTOMS are vertigo, murmurs and ringing in the ears, and all the dire attendants on cephalic repletion. To point out the CURE will be unnecessary. It must, of course, consist in producing a substitute for the suppressed discharge, by repeatedly

applying leeches to the nostrils, and diminishing, by the usual means, the local determination of blood. Frank gives a very interesting CASE of the disease. An emetic had been prescribed for nausea, to a robust man, aged about thirty, which brought on a violent dysphagia, for which our author was consulted. He tried several means, but was unsuccessful, and the patient had to be supported wholly by enemata of beef-tea and yolk of eggs, for eleven days. There was no pain, nor paralysis, of the fauces or œsophagus, no vomiting, no fever, and his pulse remained full, and his colour ruddy, in spite of his long fasting. On inquiry it was found, that he had been alternately subject to epilepsy and epistaxis, and that he had had no bleeding at the nose for six months previous. A couple of leeches applied to the nostrils removed the dysphagia in a few hours, and a relapse which took place in the following night, was removed in the same manner. This case gives us a strong example of Frank's sagacity and judgment.

Ischæmia hæmorrhoidalis, or suppressed hæmorrhoids.

Hæmorrhoids are much more common, among both sexes, than epistaxis, particularly in colder climates, and under certain modes of living. The importance of the vertebral column in disease, Frank explained in an academical oration, at Pavia, in 1791. It is from the connection with the spinal marrow, and its vessels, and envelopes of bone, cartilage, and membrane, that the varicose vessels of the rectum, so long as they are unruptured, in cases of piles, give rise to oppresion, tension, heat, and pain of the loins, abdomen, and coxæ; and to inflammation, morbid secretions, and abscesses; erosions of the vertebræ, particularly the lumbar; and from irritation and compression of the nerves of the bladder,—to dysury, ischury, and paralysis of the bladder, and lower extremities. The more distant parts become also affected, and apoplexy, amaurosis, inflammation of the brain, hæmatemesis and hepatitis, often are the consequences of suppressed hæmorrhoids.

The CAUSES may often be traced to cold and astringent lotions, applied to stop the hæmorrhoidal discharge; causing inflammation of the rectum, or aggravating it, when it previously exists. The cicatrices of ulcers, erosions, or wounds in the rectum, sometimes from the too indiscriminate excision of the piles, may also obstruct the discharge in the same way, as a similar effect is produced in the uterus, vagina, and urethra. The TREATMENT will easily be understood, when the cause is well ascertained. Emollient clysters, leeches to the anus, and dry cupping, will be useful in most cases, and besides, fomentations and fric-

tions, &c., as recommended in amenorrhœa, we may try aloes, rhubarb, sulphas sodæ, borax, bitters, and horse-back exercise, to stimulate the rectum; provided nothing contra-indicate these.

Adipose retentions, or corpulence.

A tendency to corpulence, chiefly prevails in infancy and old age, and seldom occurs in boy-hood, or middle age. It is remarkable, that some parts of the body, are nearly, or wholly free from the accumulation of fat; such as the skull, the brain, the ball of the eye, the larynx, the trachea, the cellular tissue of the eye-lids, ears, scrotum, and præpuce, the lungs, the liver, the spleen, the kidneys, the stomach, and the uterus. This proves, as Frank thinks, that fat is not, as has been said, (BOERHAAVE, VAN SWIETEN,) a percolation, through the coats of the arteries. *He proved by observation and experiment, however, that there is no part of the body, which may not be converted into adipocire, or which may not become steatomatous.* The parts more liable to become fat, are the orbits, cheeks, and chin, the breasts, loins, nates, and limbs of women ;the belly, the omentum, (HANLY *in Med. Com.*) the mesentery, and the parts about the kidneys.

In the cavities of the long bones, the accumulation is greater than in their cells; but of the functions, or office of the MARROW of the bones, we know little. Recent observation has disproved the conjectures of the old physiologists, (BOERHAAVE, *Intr. Alois. Lusit.*) that it serves to nourish the bones by contributing to the composition of the synoviæ, and rendering the cartilage more flexible; for the bones of the fœtus, and the long bones of many birds, are wholly destitute of marrow. It is more subtile and pellucid, than the subcutaneous fat, and is secreted from the internal periosteum. With the exception of the fœtus, it is more copious in a corpulent state of the body. In deer, exhausted by a lengthened chase, it is found to be scanty. From violent concussion or fracture of the bones, from rickets, syphilis, scrophula, congestion, or other cause, diseases of this marrow may arise, such as dropsy, *Hydrosteon*, (BOERHAAVE,) inflammation, suppuration, (PETIT, *Maladies des os* and LATTA, *Surgery*, I. 165.) induration, erosion, caries, (HEY, *Pract. Observ.* p. 22.) and necrosis. Frank has seen it luxuriating with fungus; and Bichat, has often seen the blood vessels of it in rachitis, enlarged in diameter; in spini ventosa it takes the colour of bloody lymph. (SCHUCKARDT, *de spina ventosa.*) The adipose tissue was long confounded with the cellular. Its true nature was suspected by Malpighi; it was detected in the marrow, by C. Havers; it was pointed out, by Bergen, Morgagni, and others; rejected by Haller, and more lately, by J. F.

Meckel; but it was only, for the first time, properly described by Dr. Hunter, and delineated by Monro and Mascagni.

The progress of corpulency is slow in health, but after some diseases, and in other circumstances is more rapid. In fattening domestic animals, the time is even accurately specified by economists. Aristotle says, a pig requires sixty days to fatten. In women, the breasts first begin to grow fat; in men, the belly; and these parts are also the first to become emaciated. In the fœtus there is no fat; it begins to accumulate under the skin in infancy, and does not affect the internal parts till manhood, and old age. (BECLARD.) Sometimes, the subcutaneous fat, by being retained, becomes so indurated as to resemble stone, though it still remains dissolvable by heat; sometimes, it produces dangerous compression of the intestines. (*Phil. Trans.* No. 326.) In other cases, it is voided in great quantities from the rectum and bladder, and two CASES are mentioned, in which this singular discharge seemed to have litttle effect on the health. Does this, together, with Dr. Babington's CASE of oily dejections, give any colour to the notion of Sir E. Home, that fat is formed by a process in the lower intestines, where, he says, it is extracted as a secondary sort of nourishment from the food? (PHIL. TRANS. ciii. 146, *and* BOERHAAVE, *de util. explor. Excrement.*) Malpighi thought, that fat was secreted by a peculiar glandular aparatus. In some diseases, when the urine becomes iridescent from the oil it contains, it gives a very unfavourable prognosis. (HIPPOCRATES, *Aphor.*) Frank is of opinion, that in the accumulation of fat alone, we are not to seek for the cause of SPONTANEOUS COMBUSTION, which so far as is known, is confined to the human race. For this has occurred as well in the meagre, as in the corpulent. Among women, more than among men, and among the old, more than among the young. Yet, he thinks, the oily principle of fat, has afforded a pabulum for the inflammable principle, evolved in an unknown manner, and by no means always in consequence of the abuse of ardent spirits. (*See* LEROUX, *in Journ. de Médécine,* and MARC, *Salzb. Med. Zeitung.* ii. 235.)

It is not easy to give an exact description of the SYMPTOMS of corpulency, at least, in its access; for these are seldom striking enough to constitute a disease. Sauvages wished to establish a standard weight, to be the test of healthy embonpoint, but the proposal was absurd. The fat usually is a twentieth, but often is a half, or four-fifths of the whole weight. (BECLARD.) Frank once dissected a man who died of retention of urine, and who had four inches and a half of fat on his belly, and weighed 400lbs. He gives examples of others weighing 480, 600, and

650lbs. The first of these, a woman, aged thirty-six, and the last, (Lambert, we suppose,) fifteen feet in circumference. Boerhaave mentions a man, whose omentum weighed 30lbs., and who had his belly supported by straps over his shoulders. His table also, had to be cut out in form of a semi-circle, to make room for him. The general effect of corpulence, which chooses for itself, in mature age, the vicinity of the heart, (See KERKRING, BOERHAAVE, MORGAGNI, *Epist.* iii. 20, and BONETUS, *de Mont.* ii.) the larger vessels, and the principal nerves,—is to compress, distract, and twist the viscera, (*Med. Obs.* and *Inq.* v. 3.) and the muscles, vessels, and nerves. Sauvages says, the liver, the spleen, and the lungs, are one half less in the corpulent than in the meagre; and the pressure of the fat, diminishes the capacity of the heart, the blood-vessels, and the lymphatics; and the blood is, in consequence, forced towards parts where the fat is less abundant; producing inflammations, abscesses, and morbid secretions. From the compression of the lacteals, and the thoracic duct, only the more liquid part of the chyle is admitted into the circulation, and gives rise to ascites and hydrothorax. The oppression of the nerves, and the consequent langour and indolence must be evident, blunting the senses, and paralysing exertion, and destroying genius, feeling, and every power of mental activity. We have the authority of the ancients, that Minerva Pinguis, would be rather a stupid goddess; and Lord Chesterfield, and Burke, (*Reflect. on the French Revolut.*) make stupidity, avarice, and corpulence, inseparable companions. Columella mentions a pig, which was so fat as to manifest no pain, although a mouse had burrowed in its flesh. Dionysius, the tyrant of Heraclea, was so fat, that he had to be kept awake by thrusting long needles into his body. On ascending steep places, or making any exertion, the heart of the corpulent man beats, and his lungs labour for breath, from being compressed. The perspiration of fat people is also copious, and its odour, rancid and disagreeable; not, however, that it corrupts by stagnating, as has been thought, for it is continually undergoing change, from secretion and absorption, as is proved by the rapid emaciation in some diseases; and that it is converted into nourishment, appears from what takes place in the hybernation of animals, in violent exercise, and in long fasting; and the sweat of the feet, and of the arm-pits, is fœtid even in the best health.

Besides these *general* symptoms, there are others of a *local* kind, such as ophthalmia from fatty tumours of the follicles; and amaurosis from fat, compressing the optic nerves. (See *Quart. Journ. For. Med.* iv. 168.) Fat also collects about the

arytænoid cartilage, and widens its superior hiatus more than the inferior and true glottis, and consequently, renders the voice weak and acute, as is observable in eunuchs and fat women. Cicero, accordingly says, that corpulency is injurious to good speaking. The enormous accumulation of fat under the chin, may bring on suffocation from compressing the trachea; and apoplexy from compressing the blood-vessels. Frank gives a CASE, in which the patient could not swallow for some days, from the pressure of fat on the gullet, and it proved fatal. It often also affects the liver and kidneys, producing retention of bile, and of urine, &c.

There is little novelty in the TREATMENT recommended, in which the ancients seem to have been as knowing as the moderns. The chief reliance is to be placed on avoiding the CAUSES, such as indolence and luxurious living. It is sometimes induced by venæsection, hæmorrhage, lactation, pregnancy, cessation of the menses, amputation, castration, &c.; but chiefly by high nourishment, particularly from generous liquors, much sleep, and a mind free from care or anxiety. Though cases of corpulence occur, even when the living is spare, and the mind perturbed. As an instance of the latter, Frank refers to the practice of cannibals in fattening their victims; but he should first have proved this to be fact. He recommends, as the ancients did, the warm sea-water bath, fasting, watching, a hard bed, moderate but continued exercise, friction, as recommended by Asclepiades and Whytt,—spare diet, and purgatives. Zacutus, was mad enough to prescribe scarification and leeches. (*de Obes. Nim.*) Spanish soap, in the daily dose of half an ounce for some years, has been strongly recommended; but he seems very doubtful of its utility, and he does not mention the use of alkalis, which is proposed on a similar principle; nor of salt, proposed by Darwin, in his Zoonomia. The use of vinegar and acids, as recommended by Etmuller, cannot be too strongly reprobated. (CULLEN, *First Lines*, iv. 13.)

Frank gives a most interesting CASE of a young married lady of Lombardy, who being threatened with corpulency, and afraid of losing her beauty, took much exercise, diminished her food, and drank daily a large quantity of vinegar. After following this regimen, for about a year, she became affected with dyspepsia, and hysteria, which went on to dry cough, burning heat, and pungent pain in the left side of the thorax,—dispnœa, and hæmoptysis. These symptoms increased, till slow fever, and night sweats, with copious purulent expectoration, and evening exacerbations, indicated the last stage of phthisis, and she was accordingly given up by her physician. In this state, Frank

first saw her, set himself to observe the symptoms for four or five days, and determined that it was not genuine phthisis—from the length of the disease, at an age, when phthisis is rapidly fatal; from the form of the body; and from a certain indescribable aspect of the countenance, which was not phthisical. He scrutinized, therefore, the whole history of the patient, and prescribed bland nourishment, such as capon-broth, with shell-fish, and yolk of egg, repeated in small quantities, every two hours; and nutritive enemata, four times a day. In a month, the night sweats, fever, and expectoration, were diminished; in six weeks the night sweats and dispnœa were cured; and three ounces of the cold infusion of cinchona were ordered twice a day. In another month, all the alarming symptoms disappeared, and menstruation, which had long been wanting, came on. The cure was completed, and the lady, in about a year, made the tour of France, England, and Germany, and returned in high health.

Vegetable diet is thought by some, (FOTHERGILL, *Med. Obs. and Inq.* v. 251.) to be a specific; but vegetables will also induce fatness, as is seen in the slaves of China, and the West Indies, during the cane harvest; and in those who drink copiously of ale.

Helminthic retentions or Worms.

Hippocrates was of opinion, that worms are produced in the intestines, by spontaneous generation, and refers for proof to the well known fact, that they are formed in the fœtus before birth, and that many children pass both round and flat worms with their first excrement. The doctrine of spontaneous generation, was first attacked with so much success by Redi, (*Experim. Generat. Insect.*) that it was almost uniformly given up, till Darwin attempted to revive it in his Botanic Garden. Since his time, many naturalists of eminence, particularly Cuvier, Lamarck, and Blumenbach, have expressed a favourable opinion of this doctrine, and among these we may reckon, the three principal writers on intestinal worms, Brera, Rudolphi, and Bremser. Frank, on the contrary, is against the opinion, though he is not desirous of going into controversy. We ourselves, unequivocally confess our ignorance of the production of parasitical worms. One fact is certain, that *such worms as are found in the human body, have not hitherto been found to be propagated out of it, and whence then, we ask, come the eggs from which they are said to be hatched?* To talk, however, of "exigua insecta per aërem volitantia," as Frank does, is an unproved, and very improbable fancy. That we may, unknowingly take ova with our food and drink, is not unlikely, and we know, that, so long as their shell remains, the stomach

will not act upon them; but where do tape-worms, lumbricoides, and ascarides deposit these eggs, since they are only found in the intestines? It is, also, well ascertained, and it is important in medicine, to recollect, that worms prevail more in weakly than in robust constitutions. Frank says, this is because the debilitated intestines afford the congenial nidus for the ova; but this is to us, a very unsatisfactory explanation of the fact, unless it be alleged, that ova exist in the intestines of all men, and require debility and mucus to hatch them. How, also, will ova explain the hereditary disposition to be affected with worms? In such obscure cases, it is, we think, more manly, and more philosophical, at once to confess ignorance of the ways of nature, than to frame theories and talk nonsense. Lamarck, for example, is satisfied with referring for proof of such wild notions to "la marche qu' a tenue la Nature, dans la formation de tous les êtres vivans."—(*Anim. sans Vertebr.* 15.)

The DESCRIPTIONS of Rudolphi and Bremser are those adopted by Frank; but though he praises Rudolphi's arrangement, and though it may be accurate enough as an *esquisse* in natural history, it unfortunately does not appear that it will much advance the means of cure, to change the name of ascaris to oxyuris vermicularis, of tænia to bothriocephalus latus, and of trichuris to tricocephalus dispar; or to arrange parasitical worms into six families, called—nematoidea, acanthocephala, trematoda, &c. Was it this which made Frank begin his chapter with "Glory and honour to Italy! Glory and honour to Germany"? In our brief sketch, we shall try to make the best of these novelties, and compare them with what was formerly taught.

The TRICOCEPHALUS DISPAR, trichuris, or whip-worm, was first observed by Morgagni (XIV. 42.), though the discovery is usually ascribed to Roederer in 1760. (ROEDERER *and* WAGLER, *Traité de la Maladie muquesse.*) The body is round and elastic, the capillary portion becoming suddenly thicker; in the male it is spinal, in the female suberect; the head is acute, and the mouth orbicular. The body is from one to two inches long, and is thread-like for two thirds of its length. It is usually found firmly fixed by its mouth to the cœcum or ileum, and is so rarely expelled as to have given rise to the notion, that it is generated only after death. Bremser, however, (*Ueber Lebende Würmer,*) has once seen a worm of this species expelled along with a multitude of lumbricoides and ascarides. It was found to prevail among the French soldiers at Göttingen in 1760, during the petuitose epidemic fever; but more, Frank thinks, as an effect than as a cause. Lieutaud once observed an instance of its accumulation in the intestines, producing fatal distension

and obstruction. (*Essais Anatomiques.*) Brera (*Lezioni sulli Princ. Verm.*) thinks that from its want of a biting organ, it must produce less irritation than some other species. M. Pascal (*Bulletin de la Faculté de Médecine de Paris*, &c. 1818, iii.) gives several interesting CASES in which he found tricocephali on dissection, both in young and old subjects, particularly one of a man, aged sixty-nine, who died of mucous phthisis; and he says, it is by no means uncommon, to find both these and lumbricoides in this disease. M.M. Alibert and Gardien think that the superabundant mucus is caused by the irritation of the worms, though this is certainly confounding cause and effect.—This comprehends almost every thing which is yet known of the tricocephalus.

The OXYURIS VERMICULARIS, ascaris, or thread-worm, was first described by Hippocrates (*Aphor.* iii.), and is, perhaps, the most common of all the species. It is usually from half an inch to an inch in length, with a round tapering elastic body, a blunt head, and an orbicular mouth. Goetze thought it was viviparous, but Bremser thinks it oviparous. It is gregarious, being chiefly found in clusters among the mucus of the rectum, though it has also been frequently found in all parts of the intestines, from the stomach downwards. Hippocrates found them in the female vagina, and Frank found about thirty of them in the urine of a girl of rank, aged seven, who was convalescent from typhus fever. Being put into a dry vessel, several of these were found alive after three days. He says, they often get into the female urethra, and excite intolerable sexual desire. Immense numbers of them have been detected in the intestines of new born infants, and it has been repeated from Hippocrates till now, that infants and children are most affected with them; though Frank is doubtful of this, as he has found them common in people of all ages, and our experience is quite consonant with his opinion. According to our observation, which accords we believe with that of most professional men, they chiefly affect those of dyspeptic, irritable, and nervous habits, whether young or old, and of course females more than males.

Of the SYMPTOMS produced by ascarides, the sympathetic are most distressing, such as convulsive cough, itching of the nose, grinding of the teeth, terrific dreams, emaciation, &c. But the more local symptoms are often very troublesome, particularly intolerable itching of the rectum and anus, chiefly towards evening; griping pains, extending to the breast, and sometimes even to the toes and fingers; alternate costiveness and diarrhœa, with tenesmus; and sometimes prolapsus ani, and pruritus genitalium. Brera says, that much of the irritation is caused by the

want of mucus in the intestines, as the countless number of the ascarides devour it for their food (*Lezioni. Princ. Verm.*); but surely this is a mere dream; for the irritation of the worms, causes a too copious secretion of the mucus, which tends to weaken the system, and if the mucus were devoured, as he says, the worms would die of hunger.

The first indication of CURE, is said to be the expulsion of the worms; and the second, the prevention of their regeneration. But this we reject, for in consequence of the numerous failures of purgatives and mechanical agents in expelling ascarides, we should at once discard the doubtful practice, which besides is liable to great and dangerous abuse, and commence from the first such measures as tend to improve and invigorate the secretion of the intestines. The greater number of purgatives, and mechanical anthelmintics, increase the quantity of mucus in the bowels, and of course afford more abundant harbour and nourishment for the worms, which, if Malthus be correct, will multiply in proportion to the means of subsistence. It is most clear to us indeed, that almost all the remedies hitherto celebrated as anthelmintics, have obtained their reputation not from their killing or expelling the worms, but from their overlooked action on the secretions of the intestinal canal. When the pruritus ani et genitalium therefore, is immediately distressing, we should use the palliative measures recommended by Frank, of enemata of olive oil, or cold water; Brera's plan of introducing a piece of bacon into the anus and again withdrawing it;—and begin a vigorous course of exercise in the open air, with light nourishing food, and perhaps wine; or the mineral acids and bitters;—and according to circumstances, calomel with ipecacuanha, or antimony and rhubarb. *Drastic purgatives and mechanical anthelmintics will, in most instances, produce worse effects than the original disease.* When masses of dead worms, indeed, are lodged in the bowels, purgatives must be given; but how are we to arrive at a diagnosis of this circumstance? So long as the worms are alive, the killing or expulsion of a great number of them—nobody, in any case, can dream of killing and expelling them all—will serve little purpose, except giving rise to a more numerous brood, as they are well known to be inconceivably prolific; and the violent measures adopted for fulfilling this apparently rational indication, very frequently render it impossible to restore that tone to the bowels which alone can prevent the speedy regeneration of ascarides. These observations, which differ considerably, at least in their extent, from the usual views of practitioners, we give on the authority of a medical gentleman who has been affected with ascarides nearly all his life, except when

he was in unusual good health, and who has observed the same principles hold true in all the cases of ascarides which he has seen. He uniformly remarked and the fact is important, that the pruritus and other symptoms were aggravated by strong purgatives, and when he took a purgative, which operated violently, for any other affection, though the ascarides had not been previously observed for months, they became soon after active and numerous. Of the several eminent authors, whose works on worms are now before us, Brera (*Princip. Verm.*) and Frank come the nearest to our views, and we are happy to have the facts which we have stated so strongly corroborated by their opinion and experience. By adhering to these principles, we shall be able to estimate, more accurately, thevalue of the numerous vermifuges which have from time to time been celebrated. We shall here, in order to be brief, give from Frank an enumeration of the principle worm medicines, the value of each of which may be estimated by the principles which we have laid down.

Among bitter vermifuges, he mentions absynthium, gentian, green walnut shells, cinchona ; and to these he adds, as tending to a similar purpose, chalybeate waters and sulphate of iron.

The volatile, acrid, and nauseous vermifuges are—garlic, valerian, rue, tansy, santonici semina or worm seed, sabadilla, asafœtida, cajeput oil, sulphur, sulphuret of antimony, petroleum, Dippel's animal oil, Chabert's oil, oil of turpentine (for rendering which pure, and without smell or taste, see Dr. Nimmo's method, *Quart. Journ. For. Med.* iv. p. 289.) sulphuric ether, spiritus juniperi, camphor, helleborus viridis, cortex Geoffreæ Surinamensis, and gratiola.

Among mechanical and pungent vermifuges he reckons tin, fructus stizilobia lana, dolichos pruriens, and powdered charcoal.

The specifics which he mentions, are polypody root, helminthocorton, spigelia anthelmia Marylandica, and chenopodium anthelminthicum.

From this numerous list, which might be greatly enlarged from Brera, Bremser, Pallas, and others, our readers may select whatever seems most adapted to the particular cases which they meet with; the principle of invigorating the bowels and improving the secretions, being never lost sight of, as on that alone, we repeat, the cure must be mainly founded.

The LUMBRICOIDES, ascaris lumbricoides, teres, or round worm, has been observed from the earliest times ; but is not so common as the preceding. It is of a whitish, or reddish colour, from five to fifteen inches long, and about the thickness of a goose quill, or a common tobacco-pipe, round and tapering towards both ends. The head is naked and trivalvular, each of the valves having an

aperture, by which it appears, as Goetze observed, to attach itself to the intestines, and sometimes, as it is said, to penetrate through them. It is like the preceding, gregarious. Frank mentions a CASE in which he saw a ball containing eighty of these worms, expelled during a fever; and another CASE, in which the whole intestines from the duodenum to the rectum was literally crammed with them. Rosenstein gives a CASE of a child who voided ten lumbricoides with a number of small ascarides, and a piece of a tænia. The patient died screaming under the most excruciating pain and convulsions. It was supposed by Wendelstadt to be viviparous; but Tyson proved that the spermatic vessels were mistaken for living young ones.

The SYMPTOMS are not much different from those of the preceding, except the lumbricoides get into the stomach, when nausea, retching, and other marks of irritation, will ensue; and often violent nervous affections, such as convulsions, epilepsy, &c. The general TREATMENT is nearly the same as that recommended for the small ascarides; the particular symptoms are, of course, to be alleviated in the usual way. Chalybeates are much praised, and their efficacy must evidently rest on their power of improving the secretions, diminishing the production of morbid mucus, and of course starving the worms and checking their multiplication.

The TÆNIA, or tape-worm has some time ago been found to consist of two species. 1. The *lata*, or *unarmed tape-worm*, is usually about twenty feet long, and from six lines to an inch broad. It consists of numerous joints, nearly square at the upper part of the body, but greater in width than in length in the middle and lower parts. 2. The *solium*, or *armed tape-worm*,—the length of which is not known, though pieces of it from twenty to thirty feet long have sometimes been expelled. Brera talks of one 200 feet, but this may have been expelled in portions; and if so, how could he tell whether there were two or more worms, as the notion of its being solitary is not thought to be well founded? Its head is armed with two projections called fangs, by which it adheres to the intestine. There is not much positively known of its mode of generation, though it has been affirmed by Werner to be hermaphrodite; and by others to be oviparous; but all this is proved more by doubtful analogy than by ocular facts; because what are taken for ova may not be so—nobody, so far as we know, having ever detected a young tænia at the moment of exclusion.

The SYMPTOMS produced by tæniæ are very similar to those produced by other worms, of which those of debility and spasm are the worst. The debility, however, seems in almost every case

to be more a cause of tape-worm, than tape-worm a cause of the debility; yet the irritation produced by taenia in the intestines will certainly prove a source of weakness, and its accompanying phenomena, though this seems to be a secondary effect.

In treating tape-worm, we should be inclined to adopt the general principles above laid down for improving the health. It is almost certain, that it is only on morbid, and not healthy, mucus, that worms feed and propagate; and if this be correct, it would obviously lead to erroneous practice, to say that we must expel the *head* of the tape-worm before we can hope for a cure, as the joints multiply so long as the head remains. This multiplication can certainly not be denied, but we maintain that it will not go on if the secretion of morbid intestinal mucus is cured; and numerous cases will bear us out in asserting, that tape-worm may exist for years, and even during life, without occasioning much uneasiness or trouble. We are convinced that this would always be the case were the secretion of mucus and the general health attended to, rather than abortive and hurtful attempts to expel the worm. In fact, the improvement of the secretions, and consequently of the general health, is not only the most effectual means of expelling worms, but also of preventing their re-production.

Hepatic Retensions—Jaundice.

The yellow, greenish, or blackish colour attending retention of bile, is sometimes observed over the whole body, and at others, is almost confined to the albuginea of the eye, with the urine of the colour of rhubarb, frothy, and (*what is observed in no other disease,*) *colouring linen which is dipt in it;* with the fæces, cineritious, grey, hard, dry, and clayey; and often with itching of the skin, constituting the morbid affection called ICTERUS, or *jaundice.* Frank does not adopt any of the received divisions of jaundice; but selects from all of them.

Our author is particularly anxious to avoid the common error of tracing every species of yellowness of the skin, and other similar appearances to a morbid state of the bile. Some of his excellent remarks on this subject, we gave in our preceding number, (page 239). Bile differs according to age, sex, constitution, and mode of life; and in one case, may be thin, dilute, pale, and even bland, and of a brownish, or greenish-yellow; in another, pitchy, sublivid, or black. Frank has seen it, in one CASE clear, like synovia; and in another, quite transparent. A knowledge of colours he remarks, is no less requisite for a physician, than for a painter. In sugillations, or in scorbutic maculæ, the colours often change daily and hourly, being first red,

then livid, black, greenish, golden-yellow, or straw-coloured. The sputa, during pneumonorrhagia and peripneumony, is often yellow also, not from bile, but from the guttulæ of blood; and the fæces often vary from yellow to æruginous, when the ductus choledochus is obliterated. He gives the CASE of a girl, who had broad scorbutic maculæ over the skin, alternating with epistaxis, or *with intense yellowness of the whole skin, even to the palms of the hands, and soles of the feet; but the albuginea of the eyes remained of a clear white, and no other symptom of icterus was present.* In jaundice, the very bones are tinged with yellow, and the teeth, except the enamel. Morgagni says, the substance of the brain is not tinged, though Frank says it may; and he has found the milk of nurses yellow, greenish, and even bitter. The skin is chiefly tinged on the neck, breast, abdomen, and arms; and the bile oozes out with the perspiration, and colours the clothes. Celsus gives a CASE, in which yellow water instead of blood was drawn off by cupping. It is very singular that the tongue and mouth, often remain of a bright red, and without any bitter taste. Frank gives a CASE of icterus calculosus, in which the colour of the face and eyes remained white and beautiful. In old persons, the tongue sometimes appears as if covered with ink at its root. Frequently the itching of the skin, particularly towards night, becomes intolerable. It is observed, to be sometimes relieved, and sometimes increased by micturition. *He gives his decided testimony against the vulgar error, that objects appear yellow to the jaundiced eye;* an error, which must have originated in the yellow colour of the albuginea.

The abdominal affections are inflation, tension, pain, spasm, colic, gripes, flatus, borborigmi, difficulty of breathing, oppression of the stomach, *loathing of food, nausea, drowsiness,* acid and acrid eructations, and singultus. Fever is often absent, but there is langour, sadness, anxiety, prostration of strength, and it is not rare to observe fever supervene to these with shiverings, and alternate flushes.

It is known that GALL-STONES, may be found in the substance of the liver, as well as in the gall-bladder or the ducts. Frank, however, is not disposed to consider all calculous concretions found here, to originate in bile; as he has seen instances in which this could not have been the case. The proper gall-stones, are from the size of a barley-corn, to that of an egg; and round, oval, or triangular in form. They are usually single in the bile ducts; but often numerous in the gall-bladder.

In ICTERUS CALCULOSUS, the symptoms arising from the actual irritation of the gall-stone, may be slight; but are often ushered in by sudden pains in the right hypochondrium, which are acute,

cutting, and lancinating; and nausea, cardialgia, vomiting, hard small pulse, cold extremities, convulsions, anxiety, and fainting succeed; and are followed by the characteristic symptoms of jaundice, above noted. This continues till the gall-stone is removed, either by the stomach or the bowels; or goes on with aggravated symptoms till death ensues. The *diagnosis* of jaundice arising from gall-stones is, however, exceedingly obscure, and difficult; and it is to be remarked, that they do not always produce icterus, as dissection has proved, that a thousand gall-stones may be found, and they may even distend and obstruct the gall-bladder and the ducts, without producing jaundice, and sometimes without apparent disease.

The CAUSES of biliary calculi are unknown; for neither the sort of food and drink, nor the atony of the primæ viæ will explain it; but their greater prevalence among females, than males, in the proportion to about five to one, would lead to the inference, that, from sedentary and relaxed habits, the stagnation of the bile disposes it to crystallize, or to become inspissated by the absorption of its more fluid parts.

When it is ascertained, as far as in so difficult a diagnosis it can be, that icterus is caused by obstructing gall-stones; their passage through the ducts, is to be promoted by emollient fomentations and clysters, the warm bath, and unguents; such as laudanum with the emulsion of gum arabic. From the observation, that cattle fed in stalls, upon dry hay, generate gall-stones, which are voided, when the cattle are sent to good summer pasture; there have been prescribed, extracts of grass, taraxacum, and endive. Gum ammoniac, various salts, and even mercury, have also been exhibited. From their chemical qualities, much was expected from alcohol, turpentine, and ether; and Frank prescribed a mixture of three parts sulphuric ether, with two parts spirits of turpentine; two scruples to be taken in whey. But the patient could not, on account of the nauseous taste, be induced to take it twice; and besides he has little faith in it, as it can only act on the stomach and intestines, and cannot reach the ducts, to dissolve the calculi. Bleeding he found useful, but sees no advantage in mercury or nitric acid. Emetics are dangerous.

SPASMODIC JAUNDICE may arise from terror, from anger, from cold bathing, from concussion, wounds, or fractures of the cranium; from viper bite, from emetics or drastic purgatives, from incarcerated hernia, metastasis of rheumatism, or colic, or from pregnancy. That this affection does not arise from compression of the ducts by tumours, or otherwise, is manifest from the unusually relaxed state in which they are found after death. It

occurs chiefly among the nervous and debilitated, and among infants, and hysteric women. In TREATING it, *all depletion and evacuations must be carefully avoided, as these are not only useless but hurtful.* Unless there is complication, therefore, we are not to be deceived by bitterness of the mouth, with nausea and vomiting. Anodynes are best in small doses, frequently repeated; and ammonia or ether, in infusion of chamomile; or an emollient, not a purgative, clyster, with the hip-bath.

The other species of jaundice he treats upon similar judicious principles, adapting the cure to the cause of the disease, and the temperament and habits of the patient.

The observations of our author on URINARY CALCULI, are equally excellent and just; but as the cure of these affections by medicines, hypothetically called lithontriptics, is extremely doubtful, if not altogether fallacious; and as he does not enter into the surgical part of the subject, we think, that our readers will excuse us for omitting what is of little practical utility, except to prevent them from trusting to delusive remedies. Lithontriptics may, however, be of use, as preventives after the operation of lithotomy.

On the Symptoms and Treatment of Hydrophobia, with several successful Cases, by M. M. Brera, West, Axter, &c.*

By making attempts to cure diseases, which have hitherto baffled all medical skill, success may be, sometimes, unexpectedly attained, or palliatives of considerable efficacy may be discovered. When we are called, therefore, to a patient labouring under hydrophobia, or any other malady, held to be incurable, we ought to examine the circumstances of the case with the greatest care, and use the most powerful means, to palliate

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* Commentario Clinico per la cura dell' Idrofobia. Del Cavaliere, V. L. Brera, in Mem. Soc. Ital. Scienz. Modena. Tom xvii., Parte Fisica.

Example sur un enfant de cinq ans et sept mois, de rage communiquée par la morsure d'un chien. Par M. West, in Magendie's Journ. de Physielogie, ii. 91.

M. Michel Axter, in Nouvelle Bibliotheque Germanique, Medico-Chirurgicale. Paris, 1821.

or arrest the progress of the disease, and not abandon the sufferer to his fate, so long as the vital energy remains. In recording the annals of our profession, we deem it of great importance to attend to all the efforts which are made with these views, and we have accordingly selected the books before us, as furnishing a sequel to our copious analysis of the excellent work of Trolliet in our preceding volume. The successful recovery of some of the following cases, gives very considerable interest; and the name of Brera, adds to these an authority which we cannot dispute. The history of his cases, it will be observed, is very similar to that of M. Trolliet.

On the 1st. of November, 1804, a wolf, of uncommon size, having descended from the Bergamasca Alps, along the valley of Serio, attacked and bit successively, in the neighbourhood of the City of Crema, thirteen persons of different age and sex, in various parts of the body, and under various circumstances. Of these, nine were attacked with fatal hydrophobia, and four were fortunate enough to escape. All these persons, but one, were treated by Professor Brera, in the hospital of Crema. As the season was temperate, and the ground free from snow, it cannot be supposed that the animal was impelled by hunger. Before attacking the individual treated of in this commentary, it had crossed the river Serio, whence we may conclude, that in brutes, rabies is not always, if it ever is, attended by hydrophobia.

It has been calculated, that a fourth part bitten by rabid animals escape the disease; and in the present instance, nearly the same portion, (four in thirteen) was remarked. But as particular circumstances accompanied the infliction of the wounds, and distinguished the disease under different modes of treatment; so the relative comparison of the cases leads us to observe, that those who escaped with life, were not all exempt from slight attacks of rabies; and, therefore, to conclude, that the preservation of life in these four cases, was not owing to that law of nature, by which the fourth part of the wounded escape. And if we attend to the fact, that the four individuals who avoided the catastrophe of the others, were the only ones who employed a uniform mode of cure, are we not entitled to think, if not positively, at least, probably, that their preservation depended on the adoption of that plan?

Fourth Case. The wolf being chased, met Girolamo Peverari, aged twenty-eight, attacked and bit him on the left side of the neck; upon which he made a blow at the beast, and to secure himself, leaped into a ditch filled with water. The animal followed him to the edge, but stopped there, and turning round, went off quietly. Peverari, as soon as the wolf was gone, re-

paired to the hospital of Crema, where it was found that the wounds were two holes in the neck, made by the teeth of the animal, pretty deep, but not dangerous. They had healed by the 10th of November, and Peverari was kept as a convalescent. The diseased state of the animal being, afterwards, fully proved; on the 19th, a plan was commenced with the patient, for the prevention of rabies, which was the more necessary, as the cicatrices had become tumid, red, and painful. A warm-bath was ordered, with friction of mercurial liniment, to the extent of a drachm daily, and the internal use, every three hours, of the following pills:—

℞. Hyd. oxymur, gr. ss.
Rad. Belladonnæ. gr. x.
In pil. iv. dividend.

This prescription was continued until the 25th, the quantity of the sublimate being increased to two grains, and of belladonna to thirty for each mass of pills. Salivation having then taken place, the internal and external use of mercury was suspended, and the treatment was confined to the warm-bath, and the use of belladonna, the dose of which amounted, on the 1st of December, to four scruples a day; and at the maximum, on the 19th, to three drachms. The mercurial frictions, were resumed on the 1st of December, the salivation having then ceased, and were continued along with the warm-bath, until January 4th, 1805, when the medicines were wholly relinquished. Peverari remained in the hospital until the 29th of the same month, and then *returned in good health to his family.* In the space of forty-seven days, Peverari took $7\frac{1}{2}\overline{3}$. of belladonna in powder, and $5\frac{1}{2}$ grains of corrosive sublimate; he used the bath fourteen times, and rubbed in $4\overline{3}$. of mercurial liniment. On the second day of this treatment, Peverari began to sweat, and pass much urine by night. His pulse remained natural, until the first salivation; he then became febrile from the inflammation in the throat and gums. During the remainder of the cure, the occasional heat of the mouth, and flow of saliva, evinced that the mercurial action was kept up in the system. The belladonna, besides the dryness of the fauces, occasioned vertigo, vomiting, tremours of the extremities, obscure vision, and pains in the orbits, which rendered it necessary to diminish, or suspend the dose occasionally. It should seem, that during this treatment, Peverari was not altogether exempt from the disposition to rabies, for besides the pain of the cicatrices, he several times entered the bath unwillingly and sighing; *the sight of the water, causing anxiety and constriction of the fauces.*

Fifth Case. The wolf having left Peverari, about half an hour after six, met Giroletti (Agostino), aged twenty-four, and assaulted him with two superficial wounds on the left part of the neck, and a deeper one on the left arm. Frassini, who followed, ran to help Giroletti, but received a wound from the beast in the right arm. The two men repaired to the hospital of Crema, where the wounds of Giroletti where united by the first intention. By the 4th of November, the wounds of the neck had healed, and on the 9th, those of the arm. The latter must have been pretty deep, for even after they had healed, Giroletti complained of obtuse pain there, with stiffness of the fore-arm, and an inability to move the three first fingers of his hand. When the nature of the disease had been proved, the preceding treatment was instituted, consisting in the warm-bath, mercurial friction of one drachm daily, and two pills every two or three hours, each containing, of belladonna two grains; sublimate, a fourth of a grain. On the following day, the 20th, the pain of the wounds, and the numbness of the fore-arm had diminished. The dose of belladonna was increased to 24 grains, and to 36 on the third day. Giroletti, although young and robust, by the use of belladonna, complained of heat in the fauces, feverishness, and such general debility, that he feared to fall, and staggered at every step. For this reason, in the course of the 22d, it became necessary to suspend the belladonna, and substitute a cordial mixture of mint-water, Hoffman's anodyne liquor, and Thebaic tincture, which soon restored him to his former state. The frictions, and the baths were repeated till the 25th, when the former where suspended, in consequence of salivation, and inflammation of the gums. The belladonna was then resumed, and combined with opium, to prevent the inconvenience of its effects. By this means, Giroletti was enabled to continue the treatment, and on the 27th, the belladonna was administered in the dose of a scruple four times a day. The urine became copious, and great sweating took place at night. On the 29th, he complained of vertigo, dulness of vision, pain in the eyes, and dryness of fauces; the belladonna was, therefore, reduced to a drachm in the day, divided into four doses. As the salivation continued, the frictions were abandoned till the 5th of December, and then continued till the 7th, when the salivation reappeared, and continuing during the remainder of the treatment, rendering the further use of friction impossible. December 13th, Giroletti being habituated to the use of the belladonna, it was thought proper to double the dose, and on the 19th, it was increased to three drachms a day. This was continued till the 4th of January, 1805, when the use of medicine was abandoned.

The man remained in the hospital during the remainder of the month, and left it *in health and spirits. He still lives with his family.*

In forty-four days he used 10 drachms of mercurial liniment, 10 grains of sublimate, and 7½ ozs. of belladonna in substance. In this instance the belladonna exceeded the other medicines; besides the ordinary effects of vertigo, dull vision, dryness of the fauces, and tremors of the extremities, it induced general debility, which was removed by the use of opium. Although Giroletti became used to this medicine,—more or less of vertigo remained during the time he employed it. The warm-bath was not long continued, *as the patient only entered it by force, complaining of anxiety at the precordia, which was changed into a choaking and fear of suffocation as soon as he entered the water.* At different times he felt a certain degree of repugnance in drinking water; wine he always swallowed with ease and pleasure.

Sixth Case:—The manner in which Frassini was wounded, has been already described. The wounds (slight ones in the right-arm) were healed by the 7th of November. On the 19th, the prophylactic treatment was commenced, and as he was a strong man, aged twenty-three, the belladonna only, with sugar, was prescribed, in the dose of six grains, four times a day, besides friction, with a drachm of mercurial liniment, and the tepid-bath. On the 20th, the belladonna was given in the quantity of two scruples, divided into four parts; after two days, in the dose of a drachm; and gradually increased to ʒij. in a day. The sweats and flow of urine, appeared on the second day of this treatment; on the fifth, vertigo; on the twelfth, dullness of vision; and on the sixteenth, blindness; which continued every morning for an hour after waking, as long as he used the belladonna. On the seventh day salivation took place, and as it lasted till the end of the treatment, (December 31st.) the mercurial frictions were given up. The tepid-bath was occasionally employed all along, as Frassini *experienced no inconvenience from its use.* In forty-eight days, this man used six drachms of mercurial liniment, the bath ten times, and took internally, upwards of eight ounces of belladonna, which was the principal remedy employed in this case. He returned to his home at the latter end of January, 1805, and still remains there in good health.

Thirteenth Case:—Carlo Giuseppe Zucchetti, seeing his daughter under the fangs of the wolf, and his wife and sister streaming with blood from the wounds which they had received, attracted all the rage of the animal, in the attempt to drive it away. This man, aged thirty-five, tall, athletic, and healthy, was wounded in the right arm, and in the left hand and thigh. His courage did not fail him, and increasing his efforts, he succeeded in thrusting his

right arm into the beast's throat, and in keeping it fixed to the ground, until others of the villagers coming up finally destroyed it.

He entered the hospital with his wife and sister on the day of the accident, and was simply dressed. He continued well and cheerful, till he heard of the death of his daughter. On the 18th of November, the wounds were perfectly healed. On the 19th the preventive treatment was begun; two grains of the belladonna in powder being taken every four hours, and a drachm of the liniment rubbed in daily. In the three following days, the belladonna was gradually increased to three drachms in twenty-four hours. After the first dose, Zucchetti felt dryness of the fauces, frequent vertigo, dullness of vision, increased flow of urine, and nightly sweats. A gentle salivation took place on the 26th of November, when the daily use of the warm-bath was ordered. The loss of his wife on the 1st of December, was his greatest misfortune, and threw him into a state of despondency, which rendered him insensible to every thing, not excepting the condition of his sister. The treatment was continued in the same manner, till January 5th, 1805, at which time, in the space of forty-seven days, Zucchetti had used fourteen tepid-baths, had rubbed in two ounces of mercurial liniment, and taken internally about eight ounces of belladonna. The effects of this treatment, were a gentle salivation, copious flow of urine, and regular night sweats. The vertigo continued, and the dull vision sometimes became absolute blindness. Almost every night he was seized with tremors, convulsions, and violent palpitations of the heart, which awoke him by the agitation which they produced. Although in a warm room, he was often seized with severe cold shiverings, and a contracted small pulse, these symptoms being followed in two or three hours by an icteric tint, particularly of the eyes, which disappeared on the following day by a copious flow of yellow coloured urine, slightly staining any thing white immersed in it.

On the morning of the 21st of December, Zucchetti had some symptoms of incipient rabies. He complained of unusual pain in the cicatrices of the left thigh, and although his countenance was sad and dejected, his eyes were bright and fierce. *He then resolutely refused to enter the bath, and when obliged to do so, was attacked with such anxiety and convulsions, that it became necessary to take him out immediately.* The same circumstances happened on the two succeeding days. A seton was then applied to the painful part, and at this period, it was thought necessary to extend the dose of belladonna to three drachms a day. About the end of December, these symptoms had entirely disappeared, and with them the dread of rabies. The treatment

was abandoned on the 5th of January, 1805, but Zucchetti remained in the hospital until the beginning of February. He returned to his home cured of his wounds, but in a state of despondency, which time alone has been able to remove. *He remained well, as did the others.*

The author presents the following CONCLUSIONS from the whole of the cases, which seem likely to throw some light on the treatment of rabies. They are simply deduced from the facts, and without any admixture of systematic doctrines or needless erudition.

1. Of all the cases, the tenth bitten by the wolf was the first who perished of rabies; then in the following order—the second, the third, the eleventh, twelfth, eighth, and first; after upwards of ten months, the seventh; and lastly, after five years and a half, the ninth.

2. The first, third, seventh, and eighth, who all perished by rabies, lost so much blood from the injuries as to debilitate them.

3. In the second, ninth, and eleventh, who also died of rabies, the integuments only were slightly wounded. In the ninth, before reaching the skin, the teeth of the wolf must have passed through a mantle, a coarse woollen coat, and two shirts, one of fine, the other of coarse texture.

4. The second and eighth, were of robust temperament, but died hydrophobic, as well as those who were weakened by hæmorrhage from their wounds. Of those who survived, the fourth, fifth, and sixth, were slightly wounded, and the thirteenth rather deeply, but with little hæmorrhage.

5. The wounds in the first, third, and seventh cases, suppurated naturally for some time, and those of the second, ninth, eleventh, and twelfth, by means of cautery, and these perished of hydrophobia. In the fourth, fifth, and sixth, who still survive, the wounds were not cauterized, and healed in a few days. The wounds of the thirteenth, also living, were not cauterized, and healed in sixteen days.

6. The appearance of nightly sweats, the copious flow of urine, and the salivation, excited by mercurials, were not critical; as these symptoms were observed, alike in those who escaped, and those who died.

7. The dread of water occurred in the eleventh, and not in the ninth, who both died. It also happened to the fourth, fifth, and thirteenth, who all survived. The tenth was, affected by the reflection of a mirror; the eleventh, by the light of a candle, and the agitation of the air; the latter, also complained of seeing a light before his eyes. Both died.

8. The third who died, and the fifth, who did not, swallowed water with difficulty, and wine with ease.

9. The pain felt in the cicatrices of the wounds, which is reckoned a precursor of rabies, was also felt by the fourth and thirteenth, still living.

10. Dryness of the fauces, copious, spumous salivation, vigilance, brightness and fierceness of the eyes, and sadness, were symptoms observed, more or less, in all, living as well as dead. The twelfth case, presented the rare phenomenon of fatal hydrophobia, without any flow of saliva.

11. If sadness, and the melancholy reflections caused by the fatal effects of hydrophobia on his nearest relations, and its possible occurrence in himself, could, as some suppose, produce this terrible affection; the thirteenth case, (still living) could not have escaped these fatal effects; particularly as during the treatment, he gave repeated signs of having suffered from the attacks of hydrophobia.

12. The disposition to bite the by-standers, was observed only in the third case.

13. Nos. three, seven, eight, nine, and ten died first; Nos. one and twelve tranquilly; and Nos. two and eleven soporose.

14. Lividity of the face and body, was observed only in Nos. eight and nine.

15. Among the most remarkable morbid appearances observed, was the inflammation of a part of the spinal cord in No. ten.

16. Opium alone and joined with musk, cantharides, caustic alkali, mercury, camphor, and succinated ammonia, was useless in Nos. one, two, three, seven, and eleven.

17. Caustic alkali largely administered, was useless in No. eight.

18. Sulphuric acid was ineffectual, in large doses, in Nos. eight and nine.

19. Mercury was given to all, and in all salivation evinced that the constitution was affected. In the seventh, the use of this remedy removed symptoms of imminent hydrophobia, which appeared, and ended fatally some months afterwards. In Nos. five, six, and thirteen, still living, a smaller quantity of mercury was given, than in those cases which ended ill.

20. All used the warm-bath.

21. No. four, still living, immediately after his wound, leaped into a ditch of cold water.

22. The seton was applied only to No. thirteen, who recovered. It excited suppuration in the cicatrices of the left thigh, while those of the left arm and head were untouched.

23. Of twelve who were treated, Nos. four, five, six, and thirteen only survived, to whom atropa belladonna was given in very large doses. This remedy affected them in a remarkable manner, producing general debility, vertigo, dullness of vision, and at last temporary blindness.

If we are to trust to these inferences of Professor Brera, we must refuse to admit the conclusion of Magendie, *(Journ. de Phys.* i. 41.*)* that, "les substances les plus active, les narcotiques les plus puissans, n'ont aucune action sur l' homme ni sur l' animal enragé." He tells us, that he even injected into the veins of rabid dogs, as much as ten grains of opium without any perceptible effect; while in healthy dogs, a single grain would have made them soporose, for eight or ten hours. The prussic acid of Scheele, was also found to have no effect; but he did not try the pure hydrocyanic acid. Along with Dupuytren, he injected without effect, eight grains of the gummy extract of opium into the radial vein of a young man, affected with rabies. With the saliva of this patient, he and M. Breschet, inoculated a healthy dog in the forehead, and it was affected with rabies a month after. Two dogs which it bit became rabid in forty days, but though these again bit several others, the latter were not affected; whence M. Magendie concludes, rather hastily, we think, that the poison is not communicable after the second transference.

M. Magendie with some of his most fearless pupils, secured with considerable danger and difficulty a large bitch in a high state of rabies, and took about sixteen ounces of blood from the jugular vein, replacing it by injecting into the orifice about forty ounces of water, at the temperature of 40° Centigrade. After this he allowed about twelve ounces of blood and water to escape. This operation had the effect of calming all the violent symptoms, and the animal lay down quietly as if to sleep. But in about five hours after, she was seized with violent dispnœa, and died in half an hour. The brain, spinal marrow, and stomach were found healthy; but the lungs were turgid with serous blood. Our author, indeed, blames himself for having injected too much water, and had begun to prognosticate effusion into the lungs. He was led to the experiment from having remarked, that—though perspiration by the skin and lungs goes on freely during rabies,—the animal ceases to drink; that the blood of rabid animals is nearly destitute of serum; and that artificial plethora from injected water is a powerful sedative. If he had not injected so much, he might have been more successful.

M. West's case occurred at Paris, in January, 1822. The child, which was healthy, strong, and intelligent, had been bit by a rabid dog about a month before M. West saw her. The wound, however, had been cauterized at the first, and had healed in a few days; but then a remarkable change was observed in her character. She became restless, fearful, and melancholy, and had errors of vision. She fancied she saw the hair which

shaded her forehead, and when her mother feigned to cut it, she shrunk back in terror, crying "Maman, tu fais comme le chien." About four weeks after being bit, she refused to eat or to drink, and was afraid when her parents came near her to take her in their arms. She complained of weariness, and desired to sit. Her head and hands were in continual motion. She spit often, and her mouth was always covered with foam. Her urine was sufficiently copious. On being placed in the bed of the hospital she became quite furious, though she manifested no desire to bite. A draught, with twelve drops of laudanum, and half a dram of ether, was forced into her mouth, but very little of it swallowed, in consequence of the spasm; and an opiate injection was proposed. Violent contortions of the limbs, with burning and redness of the face and eyes succeeded. She cried violently but soon became feeble, and her voice changed. Her face was covered with drops of sweat; her eyes were sensible to the light; her pulse more weak than natural. She died at the commencement of a fresh paroxysm.

DISSECTION shewed the salivary glands natural; but the membrane of the palate, epiglottis, and entrance of the larynx was inflamed, tumid, and red. The tongue, œsophagus, stomach, and follicles were perfectly healthy, as were also the liver, pancreas, spleen, and kidneys. The trachea, bronchiæ, and tissue of the lungs were reddish, and filled with foam. The vertebral sinus was gorged with blood, but the spinal marrow and its membranes were natural. The vessels of the brain, and choroides of the eyes were also full of blood. The teeth were locked, and the muscles rigid as in tetanus.

M. Langier has given a very clear detail of the SYMPTOMS of rabies, such as sadness, love of solitude, sighing, disturbed sleep, constriction of the throat and breast, frightful convulsions, terrible fury, loss of voice, desire to bite, &c.; all of which being usually deemed nervous symptoms, M. Georget thinks it somewhat strange, that the author should say, "qu'on n'a point encore trouvé le siége de la rage." (*Rev. Médicale, April*, 1822.) We, however, cannot see what advantage M. Georget gains by saying, that rabies is a nervous disease; it is only pushing us further into obscurity; for what practical end is to be served by it, since the whole class of nervous remedies has been tried in vain in the cure? Of the CAUSES of rabies, the greater number refer to a virus; but others think, the fear produced at the time of being bit, the pain caused by the wound, or the fear of becoming hydrophobic, give rise to the disease.

In addition to the SYMPTOMS already mentioned, M. Labonnardière observed convulsive contractions of the muscles of the

right side of the body, while those of the left were paralysed; quaking followed by suffocation, and weight of the head. On DISSECTION he found the brain softened and tinged with a blush of red; the pia mater bright red, and the arachnoid membrane slightly roseate; and the sinuses and vessels gorged with blood. He talks also of gastric and verminous congestions; of a sanguineous orgasm; and of adynamia tending to putridity.

In a CASE treated by M. Mitivié, and related by M. Georget, of a child aged eight years, who was siezed with convulsions and rabies on entering the room where seventy five days before he had been bitten by a strange dog—antispasmodics were largely administered. The warm bath—cold affusions on the head—draughts with camphor, nitre, musk, opium, mint, &c. and camphorated enemata, were tried; and at first with apparent advantage,—but the child died.

The attention of the public has lately been called to a method of TREATMENT followed in the Ukraine, and which has been published in the Petersburgh Miscellanies of Medical Science by M. Marochetti of Moscow, who was taught it by a peasant of the Ukraine. It consists in administering copious doses (a dram of the powder four times a day, or a pound and a half of the decoction) of the tops and flowers of genista tinctoria, or butcher's broom. Besides this, the orifices of the ducts of the sub-maxillary glands are to be examined three times a day for tumours in which the virus becomes concentrated, and if not evacuated will be re-absorbed. These tumours form between the third and the ninth day, and are to be instantly opened with a lancet, cauterized with a hot needle, and the mouth well gargled with the decoct. genistæ. The cure takes about six weeks. Of fourteen treated by the peasant, not one died; and M. Marochetti treated twenty-six with equal success. We give this as we find it, but are rather sceptical as to the whole story,—particularly as in all the recent dissections which we have perused, the tongue is said to be natural. M. West expressly says of his patient, "rien de remarquable sous la langue," and this he could not have said, if these tumours be—as M. Marochetti asserts they are—an infallible characteristic of the disease.

Another SPECIFIC for rabies has been set forth as infallible by Dr. L. Spalding of New York, in the Scutellaria laterifolia. It acts both as a preventive and a remedy, and according to our author has been successful in America in upwards of a thousand cases; not only in men, but in dogs, swine, and oxen. The dry powder is said to be better than the fresh plant. Its mode of action is not stated. Would it be worth while to try the

medical effects of our English Scutellariæ, the galericulata and minor?

After all, DEPLETION, when actively and judiciously followed up with antispasmodics and opiates, seems to be the most rational practice. The first authentic CASE which we have met with thus treated, is by Dr. Nugent of Bath, in 1753. The same practice we subsequently meet with by Mr. Tymon and Dr. Shoolbred of Bengal (*Lond. Med. Journ. No.* 167.), who recommend early bleeding from a large orifice ad deliquium animi, and say that late bleeding is usually injurious. Other CASES of the practice are mentioned in the Edinburgh Medical Journal, Vol. x. and xiii. One of them, by Mr. Wynne of Shrewsbury, was successful—the patient after having recovered from syncope having drank some water, and was refreshed by it.

M. J. M. Axter, of Vienna (*Nouv. Bibl. German. Med. Chirurg.* 1821.), has strongly recommended cantharides as an infallible preventive, if given in proper doses before the difficulty of swallowing liquids comes on:—unless given in the first stage, it is ineffectual. M. Axter has now followed the practice nearly thirty years, after having been disappointed in all other remedies; such as musk, camphor, belladonna, opium, oil rubbed on the body and given internally, plunging the patient head-foremost into cold water, &c. He has always observed the disease to commence with slight shivering, followed by intense pain of the wound, quick pulse, dry skin, violent flushings of heat, and head-ache. These symptoms go on till the fit is formed, which occurs in about ten or eighteen hours. He gives one grain of the powder of cantharides rubbed up with sugar, and the same quantity of pulverized crabs eyes, once a day for about six days. At the same time he applies a blister to the part bitten, and keeps it open for five or six weeks by washing it with caustic potash, or sprinkling it with pulv. canthar. When the disease becomes violent, he increases the dose of cantharides, but *then* it only mitigates, and never prevents death. After convalescence he recommends abstaining from every excitement and excess. Venery, above all other things, is particularly to be dreaded.

M. Orfila recommends washing the wounded parts with chlorine, and applying to it pledgets of linen soaked in the same; and Signior D. L. Sacco, of the Ospedale Maggiore of Milan, mentions hydro-chlorine as an infallible prophylactic. Dr. Withering, who paid much attention to the subject, was convinced that a long continued washing of the wounds with tepid water, was the best preventive. Darwin seems to think amputation, when practicable, of the wounded limb, the best security (*Zoo-*

nomia, iv. 50.). Dr. Linke, of Jena, recommends a strong solution of arsenic applied to the parts; but as he founds his proof on dogs inoculated from such as had died of hydrophobia, it is negatived by the observation of Majendie, "que la bave des animaux morts après la rage, ne la communiquait point."—(*Journ. de Physiologie*, ii. 97.)

The symptoms of hydrophobia sometimes arise spontaneously in intermittent fever and hysteria, of which cases are given by Battini, Dumas, Alibert, and Boullon. The Italian physicians in such cases say, "Non si fidino però mai i medici di altro rimedio che della china." Bark indeed is with them every thing. Dr. Clarke tells us, that in a single hospital, the Spirito Santo at Rome, upwards of 3000lbs are annually used.—(*Medical Notes*, p. 90.)

It is of some importance to mark the symptoms of the disease as it appears in the inferior animals; but unfortunately we are still very imperfectly acquainted with these. The animals which have been observed to become rabid, are the wolf, the dog, the fox, and the cat. The evidence is less certain respecting swine; and the recent instance (*Hufeland's Journ.* 1821.) of an enraged badger having bit two boys—one of whom is said to have died hydrophobic on the 26th day—is too vaguely stated to be implicitly trusted to. The bite of a rabid wolf seems to be the most dangerous, perhaps from the greater power of the animal to wound.

The symptoms in these animals are a complete change of disposition and habit. A stupid, sullen, lounging, unsociable air; the tail and ears hanging as if lifeless, and the eyes muddy and morose. When the paroxysm comes on, all the symptoms of furious madness ensue. It is a vulgar error, that a rabid animal runs straight forward without turning from his course, and is disproved by the history of almost all the authentic cases of hydrophobia which has been produced in man. The symptoms of rabies in the animal are unfortunately but too seldom apparent, till it is too late; for a tendency to bite seems to prevail either before the disease is well formed, or when the animal is calm between the fits. The fear of water seems very singularly to be peculiar to the disease in man, and has not been observed in the animals which communicate the disease, though this may be from defective observation. It is to be remarked indeed, that this symptom is only strongly present during a paroxysm. We are indebted to Dr. Jenner (*Med. Chir. Trans.* i.) for a very minute account of a disease called the *distemper*, which occurs in dogs, and is similar to rabies; but differs in this, that it does not appear to be communicable to man, though it is extremely infectious and

fatal among dogs, often destroying whole kennels—as not above one in four recovers. It is particularly requisite for practitioners to know this, as when a person has been bit by a dog in the distemper, imagination may induce (if not hydrophobia,) some unmanageable nervous complaint. Mr. John Hunter was wont to state a CASE in his lectures in which a gentleman who had been bit by a dog fell into alarming fits of dread of hydrophobia till the dog was brought to him in good health.—(*Med. Chirurg. Transactions*, i.)

M. Larrey relates the following singular CASE of hydrophobia, in a note, on a passage in his Essay on the Yellow Fever, noticed in last number:—

Pierre Courmontagne, aged twenty-two, a soldier of the Royal Guard, had been bitten, when fourteen or fifteen years old, in the left thigh by a mad dog, the cicatrices of the wounds being still visible; the animal died of rabies.

From that period, Courmontagne has suffered from a sort of nervous affection, accompanied by spasms, and slight derangement of the mental faculties, so that from the time of his entering the service, his comrades have shunned his company, and he has twice changed his regiment. He was irascible, and often agitated by involuntary motions, with a noisy irregular loquacity. He was thin, his eyes haggard, he was subject to frequent vertigo, his face florid, his pulse always hard and vibrating. He has constantly a repugnance to pure clear water, and never shews any inclination to use it, even at the time when his comrades, exhausted by the heat of the day, quench their thirst in his presence. Nevertheless, he drinks ptisans, or any opaque or coloured liquor, with more or less avidity.

Such was his state when he entered the hospital of the Royal Guard, May, 29, 1821, in consequence of a sprain of the right foot, received in running. Besides his habitual disorder, symptoms of nostalgia manifested themselves, and he expressed an earnest wish to be discharged from the service. With this intention, and to retard the cure, he secretly applied a ligature, and kept the limb in an unfavourable posture. Gangrene took place on the lateral and anterior part of the tarsus, and increased rapidly; in the end, sphacelus of the lower extremity rendered amputation necessary. After some slight irritation, the wound was going on well, and was two-thirds healed, when on the thirtieth day from the operation, the patient, all at once, shewed signs of a marked aversion to transparent fluids, with an augmentation of the spasms, and signs of cerebral inflammation. He was convulsed, with spasmodic motion of the jaw, grinding of the teeth, and a state of general tetanic contraction. All the

excretions were diminished, the spasms and stiffness increased, and the man died in the night of the thirty-second day.

On opening the head, the following circumstances were observed :—hypertrophia of the cranium, principally in the occipital region ; considerable distention of the vessels of the membranes, and of the brain, as well as of the longitudinal sinus, and choroid plexus ; small granulations at the upper part of the hemispheres ; about an ounce of yellowish serum, in the lateral ventricles ; firmness and density of the encephalon, of the medulla spinalis, and particularly of the tuber annulare, in the substance of which was observed a reddish tinge, also very manifest in the optic thalami : the neurilema of most of the nerves of the medulla oblongata, partook of this tint of inflammation at their origin. The respiratory passages, and the intestinal canal presented no other morbid appearances than some old adhesions of the lungs. The liver was increased in size. The pericardium was not inflamed, but was firmly united by old adhesions to the whole surface of the heart. The cavities of this organ were much diminished in size, and the principal vessels arising from it, had lost nearly a third of their ordinary diameter. M. Larrey thinks that the symptoms in this case, were owing to the poison of rabies, which remained latent, without producing violent effects, until developed by particular causes at the time of the affection which caused the death of the patient.

The most recent and recondite proposal which we have heard of is that of Dr. Paris, who recommends inducing local plethora in the part bitten by means of a ligature ; on the principle, that absorption is retarded in a plethoric state of the parts ; while bleeding, as Magendie proved, is the most effectual and speedy means of promoting absorption. We think this proposal a piece of pretty theorizing—nothing more ; and we are persuaded, that Dr. Paris, should he chance to be in danger of rabies—which, God forbid—would scarcely think of venturing upon so hypothetical a remedy. The *argumentum ad seipsum*, we hold to be an excellent test of such proposals ; for we find it easy enough to contrive remedies, which may either succeed or not, as the case falls out ; though, in our own case when danger is hanging over us, we never think of such waking dreams. At the same time, we see no reason why the proposed ligature might not be tried along with other means of prevention, particularly washing the wounds long and well with tepid water, poured from a tea-kettle ; ink being first poured into the wound, and the ablution continued, till the water come away untinged by the ink. (Withering).

CHRISTEN ON THE NATURE OF OPIUM, WITH THE ROMANCE OF THE ENGLISH OPIUM EATER.*

THE reason which the author has given for the publication of this Treatise will, perhaps, be the best justification of the minute account which we propose to give of it, namely, that it must be important in a scientific point of view, to bring into a monograph, the copious, but widely dispersed materials for the history of an object of the greatest interest in medical practice.

The term OPIUM appears to be derived from the East—"The source," says the author, "of so many other human things and ideas." It is called *Affion*, and *Amfion* by the Indians, Arabians, and Egyptians, according to Bontius and Alpinus; *Afiuun* by the Persians, and *Affiun* by the Moors. The Greeks called it *opion*, pretending to derive the etymology from ὀπὸς, succus, quasi μηκωνος. From this source most other nations have derived the appellation of this substance. Thus it bears the name of opium in the Latin, French, English, German, Swedish, Danish, and Russian languages. By the Italians it is called *opio;* and with the Germans and Danes, it has the additional names of *Mohnsaft*, Germ. and *Valmuesaft*, Dan.

The opinions entertained by the learned, on the nature of the *Nepenthe* of the ancients have been various. By Th. Zwinger, and more recently by Sprengel, in his history of botany, it is supposed to be opium. According to Delille, in the Flora Ægyptiaca, it is the Hyoscyamus albus. But the best authorities, with whom our author coincides, are of opinion, that the Nepenthe was derived from the Cannabis sativa of Linnæus. Forbes in his Oriental Memoirs, states that in Hindostan Bendsch, i.e., Nepenthe is prepared from this plant. Lindner, (*Neueste Kunde von Asien,*) states that Bang is derived from the dried leaves of the wild cannabis, the smoke of which is more narcotic than opium itself. The Turks prepare their Maslach, or Bangue from the fresh leaves of the lesser cannabis, rubbed up and heated in vessels which have held butter. Most of the natives of Africa, make a constant use of the Cannabis sativa of Linnæus, which they call Haschisch. Delille remarks, that it is

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* Opium Historice, Chemice, atque Pharmalogice Investigatum. Per Char. And. Christen, M. D. Lib. Reg. ac Metropol. Urbis. Budensis Phys., item Inclyt. Facultat. Med. Pest. Commemb. Vindobonæ. Apud. Frid. Volke. Pp. 316, 8vo.

Confessions of an English Opium Eater. London Magazine, Sept. and Oct., 1821.

cultivated by the Egyptians, who are ignorant of the purposes for which its fibres may be employed. Many physicians have made experiments with it, among these Domeyer, who experienced increase of bodily strength, and of the mental faculties, with pleasing sleep, and an appetite amounting almost to voracity. It is not productive of the ill effects of opium, namely, afflux of blood to the head, and constipation.

Opium is derived from two genera of plants—Lactuca and Papaver. It has been known from the earliest periods, that different species of Lactuca, principally L. Sativa and L. Silvestris, with its varieties, L. Scariola and L. Virosa, afford a bitter milky juice, bearing considerable resemblance to opium in its external characters, and in its operation on the animal œconomy. But genuine opium, has been at all times procured from the poppy. The LACTUCARIUM, well known, as an opiate, to Pliny, Theophrastus, and Dioscorides, was, sometime ago, introduced to modern notice by Dr. Duncan, sen., of Edinburgh, (*Observ. on Pulmon. Consump.*) and has since been occasionally praised, but has never come into very general use. Its high price, and the difficulty of procuring it, have been partly the cause of this. For procuring it, Mr. Young, of Edinburgh, recommends cutting off the top of the stem of the lettuce, when in flower, about a foot above the ground, and taking up the milky juice which exudes, with a moist sponge; making a fresh cut two or three times a day, when it ceases to bleed. Mr. Probart, of Great Portland-street, at the recommendation of Dr Scudamore, made an extensive plantation of lettuces, for the purpose of preparing lactucarium. Mr. Probart collects the juice by means of cotton, and inspissates by applying warm air. It is only when in seed, that the plants abound in the milky juice. Mr. Probart has also made an extract from the *old* leaves, when about to change into a yellow colour, the milky juice assuming in these a concrete form, which is concentrated in the rind of the leaves. The common lettuce is greatly superior to the virosa for preparing the lactucarium. The dose of the extract recommended by Dr. Scudamore, is four or five grains at bed-time. (*On gout*, page 233.) Those who wish to investigate the subject further, we refer to Hahnemann, (*Apothekerlexicon*, i. 360); Gumbrecht, (*Sammlung für pract. Aerzte*, II. i. p. 82.); Swediauer, (*Pharmacologia, in verb.*); Haller, *Arzneimittelehre*, p. 230.); Schlesinger and Wolf, (*in Hufeland's Journal*); and to the works of Baron Störck, of Vienna, whose experiments with vegetable medicines were so extensive.

According to Linnæus, whom Murray has followed, the Thebaic opium of the ancients was derived from the Papaver Orientale;

but neither have given any authority for this assertion. Schiller, a pharmacopolist, of Rothebury, prepared opium of very good quality from this species, (*Anzeige der Deutsch.* 1809.) Boulduc, (*Mem. de L'Acad. de Paris*, 1712) and after him, Dr. Alston, prepared good opium from the P. Rhœas. The Papaver Somniferum of Linnæus, (calycibus, capsulisque glabris, foliis amplexicaulibus, stigmatibus decem) is the species from which opium is prepared in the East; of this there are two varieties, which some have formed into distinct species—the white and the black.

The mode of collecting, and preparing the opium, has been described nearly in the same manner, by the earliest and the latest writers on the subject. According to Mr. Kerr's description of the method of cultivation in the province of Bahar, (*Edin. Med. Enq.*) the seed is sown in October and November, and the ground is irrigated until the capsules are half ripe. At this time a longitudinal, superficial incision is made in the capsule at evening, and on the following morning it is collected with an iron spoon into dishes, and worked in the sun into masses of about four pounds, which are wrapped in the leaves of the plant.

The CHARACTERS of genuine opium are the following:—It is in the form of round solid cakes, two or three inches thick, and weighing from four ounces to two or four pounds; it is dense; its specific gravity 1.336 Brisson, 1.363 Friend; it is heavy when compared with the condensed juices of other plants, being exceeded only by opoponax and gum arabic; externally, its colour is black approaching to red; internally, a yellowish, dusky red, and never black; fracture dull, except a few saline particles scattered through it; it is every where opaque; tenacious; plastic; adherent to the fingers; scissile without noise; its odour peculiar, virous, narcotic, unpleasant, stupifying; its taste nauseous, at first bitter, then acrid, pungent, leaving a sense of heat for some minutes on the tongue, lips, and palate; when moistened, it makes an interrupted, cinnamon-yellow streak on paper; when taken into the mouth it gives a dusky-yellow tinge to the saliva. It readily kindles when applied to a flame, with a vivid light, and without a narcotic odour. It is partly soluble in water, this solution not being disturbed by alcohol; it is more soluble in alcohol; very much so in wine, ethereal spirits, alcohol with potash, and aromatic waters; but above all in dilute alcohol. These solutions redden vegetable blues and give a black precipitate with sulphate of iron.

Opium should be rejected when very dusky, blackish or black, when it is of a soft consistence, greasy, grumous, rough, or fri-

able; when it is light, of an empyreumatic smell and sweetish taste; when it makes an even black mark; when it melts like wax, and makes a yellow solution in water. Turkey opium is never reckoned good unless red capsules of some species of rumex are adhering to the masses.

The ADULTERATIONS of opium are with extract of poppy capsules, or of the whole plant; with extract of chelidonium majus; of lactuca virosa; of glycirrhyza; with gum arabic, or tragacanth; with the oil of linseed, or sesame; with sand, and even with the dung of oxen,—as we are told by Mr. Kerr, is practised at Bahar, in India.

The principal CHEMICAL ANALYSES of opium are by Neuman, Zeucher, Rumpel, Josse, Lorry, Bucquet, Baumé, Harrison, Crumpe, Eccard. The analysis of this substance assumed a new character when Bucholz published in 1800. In 1803, Derosne discovered the crystallysed alkaline principle, since called *Morphine*. In 1800, Sertürner showed that it was combined with a peculiar acid, since called meconic, which he separated in the following year. The subject has been still farther elucidated by the same Sertürner, by Choulant, and by Robiquet. The component parts of opium are, a volatile narcotic principle (q. an oil?); gum; an extractive matter, partly simple and partly oxidated; resin; a concrete waxy oil; gluten; caoutchouc; morphine; meconic acid; sulphates of lime and of potash; alumina; and vegetable fibre.

The EXPERIMENTS of Sertürner, Choulant, Orfila, and Hermbstaedt, have shewn that the principle on which the peculiar powers of opium depend, is the combination of morphine with meconic acid in the form of a supermeconate. We do not find any notice in M. Christen's work of the principle of Derosne, unless he confounds it with morphine, which he has stated was discovered by that gentleman. For an account of the conclusions drawn by M. Orfila on the effects of morphine, and of the chrystallizable principle of Derosne, we refer our readers to the *Quart. Journ. For. Med.* iii. 250, et seq.

We may remark, that the EFFECTS of this drug on the animal economy are very different, according as it is given in a moderate or in an excessive dose; for in the latter case, as the author remarks, its action passes at once to extremities, proceeding quickly through the intermediate stages. A moderate dose at first excites; the vital organs re-acting with increased power; it then debilitates, a diminution of their functions succeeding. The series of these processes may be described as consisting in—increased circulation, the pulse being free, full, and quick; increase of heat, with diaphoresis and pruritus of the skin; in-

creased vascular action, and afflux of blood towards the head; quickened respiration, often amounting to dyspnœa; in the stage of greatest excitement occurs an increase of spirits, and of the intellectual faculties; hilarity, pleasure, delight. From the increased effect or the order of succession, and sometimes in delicate subjects in the first instance follow, diminished excitability; a small, weak, irregular pulse; diminished sensation: sadness, somnolency, sleep, intoxication, stupor, and hence the relief from suffering; diminished irritability; weariness; difficult motion; paralysis, dyspnœa, suppression of the evacuations, except perspiration, which is increased by the relaxation of the solids, and the increased quantity of the fluids; also the afflux of milk to the breasts.

An EXCESSIVE DOSE runs the same course, but in a shorter time, and reaches its extremity almost as soon as its action has commenced. The state of exhaustion is evinced by the full and slow pulsations of the heart, though these are sometimes small and very quick; by the sense of cold; flow of blood to the head, head-ache, vertigo, delirium; by lassitude, diminished sensibility; loss of sight, hearing and touch; by profound sleep, with horrid dreams, phantasms, or apoplectic stupor; by death-like anxiety, spasms, convulsions, paralysis, tetanus, lethargy; and lastly, by convulsive, apoplectic death.

We shall not follow M. Christen through the host of authors, whom he has quoted to prove the correctness of the effects which he has attributed to opium. We cannot avoid, however, making one remark which naturally suggests itself, namely, that he should have undertaken to give an account of the properties of this drug, and yet should have confined his researches to the experience of those who have preceded him in this career, though the series of names quoted yield to none in number or authority. The futility of such a task, however praiseworthy in other respects, is shewn by the frequent discrepances on even the most important of the symptoms, as recorded in his own pages, between those whose industry and abilities best enable them to form opinions on the subject. It is evident, that the only way of reconciling these difficulties, if that be possible, would be by original observation of those circumstances, possibly trifling, relating to the disputed points, which were the causes of the varying results at which different investigators arrived.

We pass to the consideration of the MEDICAL EFFECTS of opium, and the circumstances which regulate its exhibition in diseases; or as the author, not at all behind hand in the employment of hard names, has called it—*Opio-iatriké*.

It is a matter of some doubt, and difficulty, to fix accurately

the INDICATIONS and CONTRA-INDICATIONS for the employment of opium,—a medicine, as has been shewn, first increasing and then diminishing the vital actions. As its effects are principally exerted upon the nervous system, to arrive at perfect precision on these points, would require a knowledge of the functions of this system much more complete than we possess, if, as the author says, we confine ourselves to facts, and neglect the assistance of pompous hypothesis and sounding words.

The first principle which the author lays down, is that it is in general indicated in a state of excessive sensibility or excitement. As cases which call for its employment for the purpose of diminishing excessive sensibility, he instances,—pregnancy, childbed, and hysteria, in women; in men, hypochondriasis. The pain or motions, consequent on excess of sensibility, particularly require this drug. Of this nature, are, external injuries and wounds, fractures, pain from calculus, from colic, spasms in intermittent fevers, the diseases arising from or accompanied by spasms; dropsy, amenorrhœa, cough, and variola.

As instances of its propriety in states of EXCESSIVE EXCITEMENT, (stimulus nimius) are ranked diseases from suppressed perspiration; as exanthemata, rheumatism, arthritis; in the formation and progress of variolous eruption; in coughs, by tranquillizing, or as we should say, by lessening the sensibility of the respiratory passages; in topical inflammations, when the local excitement continues after the employment of evacuations; in states of convulsion, debility, and great pain; in anomalous affections of the nervous system. Excessive evacuations, persistent, debilitating and not critical, call for the use of opium, equally on the grounds of excessive sensibility and excitement. Sydenham reduced the indications for its exhibition to distinct heads, in these words:—"Opium tribus affectibus convenire: doloribus, ataxus spirituum, et evacuationibus intestinalibus." The author considers these three important indications in detail. Of the first, comprising spasms and pains, we need say nothing; under the second, may be ranked a depressed state of vitality, with deficient action of the cerebral vessels; diminished excitability and indirect debility. Also the commencement of inflammation with diminished excitability, with a hard contracted pulse, with cold sweats, pallid skin, cold extremities, and a clean tongue. In such cases, Frank has recommended opium, joined with tonics, particularly cinchona. It is also serviceable in active inflammations after venæsection, when there are cough, pain, spasm, and watchfulness present, particularly if it be combined with calomel. Under the third head of excessive irregular evacuations, are included diarrhœa, dysentery, hyperemesis, cholera, hæmorr-

hage. These are relieved by opium, artificial evacuations being premised or omitted, according as they are uncomplicated, or derived from unnatural excitements. Opium is particularly useful when they arise from excessive sensibility, or irregular motions of the secreting and excreting organs.

The CONTRA-INDICATIONS to the use of opium were first correctly laid down by Young. (*Treatise on Opium, Lond.* 1753.) The following are the principal:—Opium is injurious during the existence of a state of increased vital action. Hypersthenia, increased excitement, plethora, the phlogistic diathesis, or violent inflammatory fever, contra-indicate the use of opium. To use the words of Young, opium is an improper remedy in those cases which call for venæsection. In synocha, for instance, the action of the vascular system requires to be diminished, which opium would rather tend to increase. In hypersthenia it is clearly improper. M. Christen enumerates, as signs of this state, a strong plethoric habit, a hot red skin, afflux of blood to the head, a flushed tumid face, the eyes bright, or dull and heavy, the lungs oppressed, with difficult respiration and warm halitus. Cullen remarks, that opium is improper in inflammations, when it does not produce perspiration. It is almost always observed to be contra-indicated in febrile watchfulness and head-ache.

The *second* head of contra-indication, is a depressed state of the nervous system, approaching to paralysis. The phenomena of this state, are insensibility, sopor, vertigo, silent delirium, and apoplectic stupor, all of which frequently occur in malignant fevers. This state is to be judged of by the condition of the animal and vital functions, particularly by the pulse, and respiration. Under this head may be arranged, debility of the irritable and contractile systems, particularly the muscular. Here also is to be referred an atonic state of the bowels and stomach, shewn by slow, imperfect digestion, and scanty alvine evacuations.

Opium should not be given in the critical stages of a disease, as it hinders all the excretions, perspiration excepted. For this reason it should be withheld, when there is expectoration of thick copious sputa; in diarrhœa, particularly that of children from teething; in the excretion of cloudy urine, &c. this caution is more necessary, if these discharges be attended with relief to existing disease.

This medicine should also be abstained from in diseases caused by the irritation and distention of retained discharges, &c. Of this nature, are, a state of gastric disorder; of acrid intestinal sordes; of constipation; of abdominal obstruction;

unless these diseases should arise from spasm. Jahn, (*Mat. Med.* ii. 247.) says that opium is almost uniformly contra-indicated in jaundice, and gives as a reason, a power which he supposes this drug to possess of increasing the quantity of carbon in the animal system.

We think, that in this part of his treatise, namely, the contra-indications to the use of opium, so intimately connected as it is with the consideration of its general injurious effects upon the system, M. Christen has not paid sufficient attention to the experiments of modern physiologists. We do not observe the name of Majendie; and that of Orfila, is only once mentioned in the course of the work, without any allusion to his important observations. To these, we have already alluded. Since the appearance of M. Christen's work, M. Chossat in his valuable Memoir on Animal Heat, has published some very curious and interesting facts, relating to the influence of opium on the nervous system. (See *Quart. Journ. For. Med.*, iii. 492 and seq.)

Having laid down the general principles, which ought to regulate our conduct in administering or witholding opium, M. Christen next proceeds to the laborious task of discussing the advantages or inconveniences to be expected from its employment in a long series of diseases, embracing nearly every thing included under the nosological titles of Pyrexiæ, Profluviæ, and Retentiones, Cachexiæ, and Neuroses. This enumeration may serve to give some idea of the extent of this division, one of the most considerable in the book, and to shew how hopeless would be the attempt to follow him in the details. We shall, therefore, content ourselves with what appears to be most interesting and practically useful.

In TYPHUS, the author on the whole seems partial to the use of opium, especially when unattended by inflammation. He quotes Jahn, however, (*Mat. Med.*) to prove that some epidemics of this nature, will not admit of its employment. In the typhus, attending on the devastations of war, in 1813-14, even small doses produced apoplexy, and accelerated the fatal termination; the vital powers of the soldiers affected, being wholly exhausted by all the miseries attendant on warfare.

In INFLAMMATIONS, M. Christen speaks in the highest terms of the advantages to be derived from the combined effects of opium and mercury, a discovery for which he gives full credit to Dr. Hamilton, and those who followed his practice in this country. The cases which he indicates as peculiarly adapted to this plan of treatment, are:—mixed asthenia, rheumatic inflammations, particularly of the lymphatic system, and inflammations which have been diminished by venæsection. The state

of typhoid inflammation he considers as marked by a small, tense, contracted pulse; by a dry, discoloured skin, the perspiration being either tenacious or wholly suppressed.

In PNEUMONIA, its utility has been much extolled by Horn, (*über die Erk. und Heilung der Pneumonie*). Jahn and others, are of opinion, that it is improper in the early stage of pleuritis; but Sarcone, at Naples, gave opium to the amount of half a grain every three hours, venæsection and fomentations being employed at the same time. Huxham among others, employed it freely after venæsection and evacuants; the lungs being unloaded, and the pulse soft and free. To one patient, he gave seven grains of opium, and two or three ounces of diacodion, in the course of twenty-four hours, drawing blood three times in the same period. Jahn and Vogel recommend opium in particular, when after the antiphlogistic plan has been pursued, the pulse remains hard and small, the cough dry and difficult, the sputa bloody, respiration laborious, with acute pricking pains; the skin dry, or covered with tenacious perspiration, the urine clear: in such instances, antimonials form a very useful addition. The salutary effects to be expected, are:—repose, diminished cough, free respiration, and moisture of the skin. Cullen remarks, that if these effects do not follow, opium is injurious. Horn remarks, that opium in small doses is particularly indicated in the asthenic fever, accompanying pectoral inflammations. In typhoid or rheumatic inflammation, if venæsection does not diminish the pain or fever, Hamilton recommends us to give calomel gr. v., opium gr. i. every six hours. In spurious and typhoid inflammations, the action of opium is assisted by mercurials, antimonials, camphor, seneka, &c. according to circumstances.

We have been thus particular in our extracts on this subject, for we think, that though the plan originally suggested by Dr. Hamilton of treating inflammatory diseases, has been often practised with the most happy results, it has never met with that extended and steady employment which its real merits entitle it to. Nor is it a difficult matter to account for this circumstance. Men's minds naturally revolted at the idea of a plan of treatment so diametrically opposed to generally received opinions; the ridicule that ultimately attached to the theory and practice of Brown, which Dr. Hamilton's plan seemed so closely to resemble; and particularly the influence of what we may call the vascular pathology of latter days, so vigorously advocated and carried into effect—all these are more than sufficient to explain the comparative oblivion into which Dr. Hamilton's plan has fallen. But it is high time we should recollect that medi-

cine is an experimental science, to be cultivated with success only by observation and induction; that theories should yield to facts, and not facts to theories; and that those whose names hold the highest rank in the annals of our art, were content with the humble task of seeking truth in the observation of daily occurrences, and left the office of building castles to those who, though they might shine with temporary splendour, are now forgotten, and have not left a wreck behind.

In HEPATITIS opium had been for many ages employed in the Indies before Hamilton was accidentally led to its employment. Bontius, who was first physician of the Dutch establishments in Java, says in his valuable work (*De Medicinâ Indorum*), that without the advantages to be derived from opium the practice of medicine in India would be very unsuccessful, as regards dysentery, cholera, ardent fevers, and all the other diseases arising from bilious affections. Few of our readers can be ignorant of the very striking success attending on the combination of mercurials and opiates in the same affections of the same climates as reported by some respectable modern practitioners. We give them every credit for careful observation and practical activity, but we are very far from admitting the claims of those who arrogate to themselves the reputation of having introduced, or we may say invented, this plan in our own times. These claims, indeed, afford a very good instance of the facility with which men submit their reason to bold and confident assertions, without looking for proofs.

There have at all times been differences of opinion as to the propriety of giving opium in the case of WOUNDS, after the greater operations; lithotomy, amputation, &c. Cullen, and with him many surgeons, recommend it for the purpose of diminishing sensibility and apprehension. Richter advises it to be given both before and after operations. Bromfield remarks, that it has more effect than venæsection in preventing the access of inflammation. The rational indication for its employment is to diminish sensibility, for instance when spiculæ of bone, or other foreign bodies, produce much irritation; above all, when there is an asthenic state, severe pain or great anxiety without much or general inflammation. Erhard, in his fourth edition of Jahn's Mat. Med. warns us that it should not be indiscriminately used in such cases; and gives as contra-indications, topical and general inflammation, with tension and anxiety. In these instances, if it lessen the external inflammation, metastasis to some of the viscera may be looked for. Erhard, from extensive experience, agrees with the well known aphorism, "Brunonis ferocitantis," as our author calls him: Opium mehercle non sedat.

Opium was first applied to the cure of OPHTHALMIA by Mr. Ware, at least in latter days, for the practice is mentioned by Dioscorides. It is most useful in chronic, asthenic, cachectic inflammations, particularly those caused by scrophula, gout, venereal diseases, &c. According to Jahn (*Mat. Med.* ii. 236.) it is most likely to be successful when the affected organ is very sensible, when there is much pain from its motion, with intolerance of light, lachrymation, and a contracted state of the pupil. He also recommends the combination of the external use of opium and its administration internally with calomel and tartarized antimony. Haar has highly recommended opium in the SEROUS OPHTHALMIA of children—the *Ophth. Purulens* of English writers. In such cases he considers bleeding, blisters, purgatives, and cold applications, hurtful; he employs a poultice made with bread, laudanum, and water: ʒij of the one to ʒiv of the other. Internally he gives decoct. cinchon. and an anodyne at night.

On no disease are the opinions of the use of opium more varied than DYSENTERY. With Sydenham, Richter, Vogler, it is salutary, nay divine; with Zimmermann, Mursinna and Hahnemann it is wholly prohibited: whence this difference? "Not from the remedy," says Dr. Christen, "but from the disposition and the manner of the observers." The following works on the subject he considers worthy a perusal: Zimmermann, Mursinna, Bruning, Vogler, Horn, Wedekind, Richter, Jugler; and in Hufeland's Journal—Hufeland, Michaelis, Klimpe, Hargens, and Wendelstadt. The contra-indications in dysentery are, an inflammatory state of the intestines, with fixed, constant pain; great tenesmus; scanty, mucous, bloody evacuations, without relief; scanty, high-coloured urine; and a quick, hard or full pulse. A state of gastric disorder with a foul tongue; bitter taste in the mouth, turbid, serous urine; the pulse intermittent, or a little disturbed. A nervous, putrid state, with dark, copious evacuations; putrid typhus; great muscular debility and afflux of blood to the head. On the other hand opium will be useful; where there is excessive sensibility; in the nervous state, when the patient is weak, pale, with cold extremities, copious fœtid dejections, deliquium and cold sweats; when the inflammatory stage is past or much diminished; when the state of gastric disorder is absent. The most certain inferences are to be drawn as to the use of this remedy from the state of vitality at the time it is required. Bontius styles it a most valuable medicine in dysentery. Willis (*Pharm. Rat.*) and Haller say, this disease can hardly be cured without it; and Sydenham, after several cautions, recommends that it should be employed to check the profluvium, evacuations being premised.

The CULTIVATION of opium in England, has recently attracted some attention from the great price at which foreign opium is procured, and no less from the great gain which might accrue from the speculation. About 600,000lbs. are annually exported from the Ganges, yielding the East India Company a revenue of about £200,000. Mr. Young has been the most successful experimenter on this interesting subject, and has given an account of his proceedings in the second number of Brewster's Journal. He found that the most opium could be obtained from the poppies which were sown in drills between rows of asparagus or early potatoes, as in that case, more and larger capsules are produced, than when they are sown closely and broad cast. The following is Mr. Young's estimate of the produce of an acre:—

	£.	s.	d.
56lbs. opium, at 36s.	100	16	0
36lbs. Bolls early potatoes, at 24s ..	43	4	0
250lbs. of poppy oil, cold drawn	18	15	0
125lbs. ditto, warm, at 6d.	3	2	6
500lbs. oil casks, at 18s. per cwt.....	4	10	0
	170	7	6
Expences.....	60	0	0
Total Profit .. £.	110	7	6

The ANTIDOTE which has hitherto been proposed, to obviate the effects of an excessive dose of opium, is a powerful emetic, and keeping up the energy of the system with wine and brandy. Dr. Currie, of Liverpool, proposed the effusion of *warm* water to assist the operation of the emetic. All means, however, often fail to rouse the stomach from its torpidity, and the patient sinks hopelessly. The very powerful auxiliary of the cold affusion, has been lately tried in several cases with complete success, by Mr. S. Wray, of Fleet-street, and is very creditable to his ingenuity and judgment. We think it, not a little, strange, that Dr. Currie did not try it, particularly as he mentions the affusion of warm water (*Med. Reports*). Our friend, Dr. Copland, who is particularly zealous in the improvement of active practice, tried it in a recent case with the same success which attended its trial by Mr. Wray. We are happy to observe, that both these gentlemen are about to publish their cases (*Med. Reposit., June*, 1822).

The tale related in the London Magazine, we should certainly not have noticed, had it not been taken up very gravely by our cotemporaries, as a genuine medical report on the effects of opium. The story itself, though it possesses some interest at the commencement, is both ill-told and aimless; and we believe, that few have had the patience to read beyond the introduction, which, by the way, is full of the gross, and disgusting immorality of the German school, that produced Werter, and the Stranger. The opium-eater strains hard to picture an amour with a common strumpet, as the most innocent, chaste, and delicate action of his life; and in this, perhaps, he may be believed; for one holding such principles, and professing himself a disciple of the German morality, can have nothing in common with genuine English virtue, and English principles. This part of the story may, for ought we know, be true; but we hesitate not to express our conviction, that as a whole it is a wild romance of the most clumsy and stupid construction.

We must confess also, that the style of writing, which has been so fulsomely lauded by some, appears to us to be very far removed from elegance and simplicity, and full of harsh and inverted sentences, for example:—"Medical account, therefore, of my emancipation, I have not much to give." We shall just give one example out of many of the absolute raving of this romancer, to furnish our readers with a test to try his evidence concerning the effects of opium:—

"I was stared at, hooted at, grinned at, chattered at by monkeys, paroquets, by cockatoos. I ran into pagodas; and was fixed for centuries at the summit, or in secret rooms; I was the idol; I was the priest; I was worshipped; I was sacrificed. I fled from the wrath of Brama, through all the forests of Asia: Vishnu hated me: Seeva laid wait for me. I came suddenly upon Isis and Osiris: I had done a deed, they said, which the ibis and crocodile trembled at. I was buried for a thousand years, in stone coffins, with mummies and sphynxes, in narrow chambers, at the heart of eternal pyramids. *I was kissed, with cancerous kisses, by crocodiles;* and laid, confounded with all *unutterable slimy things*, amongst reeds, and Nilotic mud."

Those who can take interest in reading such nonsense, are welcome, if they think proper, to praise the style of the writer; but we must be permitted to think very humbly of their taste, and of their judgment. The descriptions, bring strongly to our recollection certain dreams and ravings of Mr. Coleridge, for instance:—

A thousand thousand *slimy things*
Lived on, and so did I. *Ancient Mariner.*

We confess, that we did begin to look for—

> Sir Leonel, the baron rich,
> And his toothless mastiff bitch. *Christabelle.*

But in this we were disappointed, though we found enough of Kant, the Trancendentalist, and other absurdities, which there was not much difficulty in tracing to a stray poet, stumbling among the mountains of Cumberland, bewrapt in an opium reverie.

We must be excused from giving his statement, respecting the effects of laudanum, of which he says, he took 8000 drops a day, or 320 grains of opium; for if the history is genuine his evidence, from the acknowledged wild state of his mind, can prove nothing; and if the whole is a fiction, as we believe it to be, it would be idle to trouble our readers with what is untrue. It was to be expected, that the Germans would not overlook the compliments paid by our author to their Trancendental (i.e. unintelligible) metaphysics, and to their sentimental morality, which ranks adultery, robbery, and murder among the virtues. Accordingly, we find N. H. Julius giving a grave account of the "Bekenntnisse eines Mohnsaftessrs," in his *Magazin der auslandischen Literatur, der gesammten Heilkunde*, for January and February, 1822.—We think, we have done our duty, in warning the younger part of the profession from being taken in with the imaginations of a poet whether writing, or *running a muck*, at morality, or medicine.

As to the great quantities of opium, which may be taken without injury, by those habituated to its use, we believe, no professional man could say, precisely, how much or how little, would prove fatal in any particular case. We recollect once, of having seen a poor woman put a pint bottle of laudanum to her mouth, and take a hearty draught of it. She said this quantity would only serve her till next day.

M. Boyer on Surgical Diseases and Operations.*

The preceding volumes of this extended work, are already ranked among the standard productions of surgical writers, and continue to be referred to as specimens of the prevailing practice

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* Traité des Maladies Chirurgicales et des Operations qui leur conviennent; par M. Le Baron Boyer, Chirurgien en chef-adjoint de l'Hopital de la Charité, &c. Tome vii. Paris, 1821. Pp. 583.

and opinions among our active and intelligent neighbours. And, though we may occasionally meet with apparent erroneous, or antiquated ideas in their perusal, it is impossible to deny their claims to considerable authority, when we look to the long experience which the author has enjoyed in a school of surgery, which will admit of comparison, with advantage to any other of the present day.

The volume before us has the same recommendations, and though generally of little consequence, the same faults. It includes the diseases of the neck, and some of those of the abdomen, as far as they come within the sphere of the surgeon.

The surgical diseases of the NECK, of which we gave a minute detail in the review of Allan Burn's Work, in our 13th Number, are either those which are common to other parts of the body, or those which are peculiar to the organs contained in this part. Of the first kind, are inflammation, wounds, tumours, &c.; of the second, are wry-neck, enlargement of the thyroid gland, the affections of the larynx and trachea, with those of the pharynx and œsophagus.

PUNCTURED WOUNDS of the back of the neck, are rarely complicated with hæmorrhage, because the arteries of importance in that part, are few in number and deeply situated. At the anterior part, on the contrary, the number of vessels is so considerable, that it is a matter of surprise that the point of any weapon should penetrate deeply, without injuring some of them. In such cases, if the artery be small, we are to employ compression by means of graduated pads. But when the vessel is of any considerable magnitude, compression is very uncertain in its effects, and it becomes necessary to have recourse to the ligature. This, says M. Boyer, would be the only measure proper in the case of a wound of one of the carotids; but its application would present great difficulties, particularly if it should happen under the division into internal and external. For the method of discovering the point of division, see *Quart. Journ. For. Med.* iv. 79 and 81. As to the external carotid, he continues, it is not absolutely impossible to expose it at its lower part, where it is covered only by the skin and platysma; but at this point we are liable to tie or to wound the internal carotid, it being closely attached to the external, which would be a serious accident. Higher up, the two arteries are at a distance from each other; but the external, is too deeply situated to be included in a ligature with facility.

As for the COMMON CAROTID, it is so large, and so near the heart, that when it is wounded, death commonly ensues before assistance can be procured; but if this should not be the case,

it would be the duty of the surgeon to tie the artery. After explaining the mode in which such an operation should be performed, he adds, that it presents so great difficulties, that it can only be justified by the imminent danger in which the patient is placed. These difficulties arise from the impossibility of suspending the flow of blood during the operation, and from the relations of the carotid with the vagus, and great sympathetic nerves. These nerves being united to the artery in a cellular sheath, it is almost impossible to avoid wounding, or including them in the ligature. The vicinity also of the internal jugular vein, which may be wounded, adds to the other difficulties of the operation. From all these considerations, and even supposing the most favourable circumstances, for the ligature of the common carotid artery, he thinks this operation one of the most hazardous in surgery, and that it will, perhaps, never be performed with success.

Many very different diseases have been confounded under the denomination of WRY NECK; for instance, the contraction arising from the irregular cicatrization of a burn, the tumefaction of the cervical glands; the formation of a scirrhous tumour in the substance of the sterno-mastoid muscle; a phlegmon; a boil; erysipelas; the paralysis, or convulsion of the muscles; their induration; rheumatism, &c. When the disease arises from the irregular contraction of cicatrices, it may be remedied by dividing them, and by keeping the head in its natural position during the healing of the wounds thus made. Of this practice, we gave a very interesting case, by M. Boyer, in our 13th Number. Rheumatism and paralysis, or convulsion of the muscles, particularly of the sterno-mastoid, are the most common causes of this disease. These affections are very frequently produced by the topical application of cold. A violent contusion on the cervical region, a heavy load carried on the head, or mercurial frictions of the neck, have sometimes produced a paralysis of some of the muscles of this part. The convulsions of the muscles of the neck may be owing to moral affections, by which they have been periodically excited in some cases. Wepfer relates the history of a man who had a wry neck, caused by the convulsive action of the muscles of that part, which appeared, whenever he was tormented with chagrin, and ceased as soon as he was restored to a state of mental tranquillity. The symptoms are somewhat different, according to the nature of the affection, which produces the disease. Rheumatism of the muscles is accompanied by a greater or less degree of pain, either constant or intermittent. In this case, the immobility of the neck is caused by the pain, which every attempt at motion

produces. When the wry neck is the consequence of the paralysis of the sterno-mastoid, the face is turned towards the seat of the disease, and the head is inclined to the opposite side. In the case of convulsive action of one of these muscles, an opposite effect is produced, the face being turned to the side which is unaffected. The wry neck, resulting from the paralysis of one of the muscles, may for the most part, be readily distinguished from that produced by an increased force in the action of one of them. In the latter case, the head resists all attempts at motion, and when it has been carried in a different direction, returns to its original position with a sudden involuntary motion. In the case of paralysis, it yields without resistance, and resumes the unnatural position without violence. In convulsion, the hardness accompanying the forcible contraction of the muscle may be distinguished through the integuments; in paralysis, on the contrary, all the parts of the neck retain their natural softness. The operation of dividing the sterno-mastoid is not equally applicable to all cases of wry neck. It would be useless, if this were not the only muscle that was contracted, and particularly if the disease were of long standing, for in such cases, the cervical vertebræ having accommodated themselves in their form to the unnatural position of the head, would present an invincible obstacle to its restoration.

M. Boyer mentions another disease of the neck, which bears a remote analogy to the wry neck; it is the FLEXION OF THE HEAD forwards, in consequence of the paralysis of the muscles of the back part of the neck. In one instance, the disease proceeded so far, that the head, acted on by its own weight, and by the action of the flexor muscles—sunk, and the chin rested upon the sternum. All possible measures were unequal to effecting a cure, but the inconveniences of the disease were obviated by a machine, which supported the head in a vertical position.

After mentioning the circumstances under which BRONCHOCELE appears, and those which are assigned as the causes of its formation, the author speaks of its progress and terminations. According to M. Fodéré the progress of the goitre in those countries in which it is endemic, is affected by certain occurrences. Thus in dry weather when the ground is parched, in winter when it is dry and frozen, the goitre if it be small, disappears; if it be large, diminishes in size; but when rain falls in spring with warm weather, the goitre re-appears; it increases with the rains of autumn; it remains stationary if the winter be mild and rainy; but diminishes if it be cold and dry. This is not the case when the goitre is sporadic. It makes a more or-

less rapid progress until a certain period, when it no longer increases. In some cases, however, it enlarges to an unlimited extent, and threatens the life of the patient by suffocation or apoplexy. In other cases, without having attained an extraordinary size, it undergoes changes of different kinds. Sometimes it inflames either spontaneously or from an injury. When the inflammation is active and occupies the whole tumour, it may cause a sufficient degree of compression on the larynx and trachea, to render respiration difficult, and threaten suffocation. But for the most part inflammation of this organ is chronic, indolent, and unaccompanied by its usual symptoms. The part becomes soft, and after a long time has elapsed with successive attacks of inflammation, a chronic abscess forms, the evacuation of which is almost always followed by a cure. The goitre may become scirrhous, and pass into a state of cancer, but this termination is very rare. It is always followed by the death of the patient, produced rather by the pressure of the tumour on the trachea, œsophagus, and great vessels, than by its general effects on the animal economy. A termination of the goitré still more rare, is its transformation into a fungous substance; in this case the tumour softens as it increases in size, and gives a deceptive sensation of fluctuation to the fingers. If from inattention, and mistaking it for an abscess, it be opened, a hemorrhage follows which it is difficult to repress, which returns from time to time, and which may possibly prove fatal. A soft reddish fungus protrudes through the opening, which yields to the fingers, bleeds when it is touched, and cannot be completely destroyed either by cautery or the knife.

Under the term of BRONCHOTOMY, M. Boyer comprehends the operations of laryngotomy and tracheotomy. The cases which may call for its performance are, cynanche laryngea; the presence of foreign bodies in the trachea; the compression of this canal by a foreign body lodged in the œsophagus; and an excessive swelling of the throat from inflammation. He objects to this operation for the purpose of inflating the lungs in cases of suspended animation, for in such instances he thinks it possible to effect this object by blowing through the nostrils, or by means of a canula introduced through the opening of the glottis. On the other hand, in those cases in which the free passage of air into the lungs is impeded in cynanche, he recommends that an artificial opening should be made, and disapproves of the practice so highly spoken of by Desault and some of his pupils, of introducing a tube into the larynx from the nose. The anatomical disposition of the parts renders laryngotomy more easy in performance than tracheotomy. In the first case no vesse

is liable to be wounded which would bleed sufficiently to cause any embarassment. There is, however, a little artery on the crico-thyroid membrane which runs in a transverse direction, and which would be inevitably divided if the membrane were cut in a longitudinal direction; this danger may be avoided by making the division of this part transverse.

In TRACHEOTOMY, on the contrary, though the trachea is only covered by the skin, and by the sterno-hyoid and sterno-thyroid muscles, it is much more deeply situated than the larynx. There is no arterial branch before this canal which could produce hemorrhage to any extent, if we except the rare instance of a branch of considerable size, running to the thyroid gland. But the case is very different with the veins: those called the inferior thyroid, are placed a little obliquely in front of the trachea, so that it is almost impossible to expose it, without wounding them, or some of their branches. This hæmorrhage is not dangerous from its amount, but by obscuring the parts, it renders the incision of the trachea more difficult, and by running into this canal when it is opened, threatens the patient with suffocation.

From this comparison, it is evident that the operation of LARYNGOTOMY is more simple, and more easy, than that of tracheotomy, and that it ought to be preferred in all those cases in which it is likely to answer the end proposed in the operation. Thus M. Boyer decides, that the incision of the crico-thyroid membrane is sufficient for the purpose of restoring the passage of air, when it is intercepted by a cause such as cynanche, situated above this membrane, though as we conceive it admits of considerable doubt, if this situation be not objectionable on account of its proximity to the seat of the disease. Laryngotomy is exclusively proper when a foreign body is lodged in one of the ventricles of the larynx. When the obstacle which impedes the passage of air is situated below the crico-thyroid membrane, as for instance a foreign body fixed in the upper part of the œsophagus, and which does not admit of being pushed down into the stomach, tracheotomy is exclusively applicable. It is to this latter operation that we should have recourse when the trachea is obstructed by a foreign body; but in this case, in order to avoid the inconveniences attendant on tracheotomy, M. Boyer recommends the adoption of laryngo-tracheotomy, that is to say the incision of the cricoid cartilage, and of the two or three first rings of the trachea. The only part of any consequence injured in this operation is the middle portion of the thyroid gland; but this is in general so thin, so narrow, and its vessels so small, that there is little chance of any inconvenience resulting from it.

We are at a loss to understand the reasons which induce many practitioners to consider tracheotomy as the operation exclusively proper for the extraction of a foreign body from the trachea. It is admitted that laryngotomy is infinitely more easy in the performance than tracheotomy, and we have already quoted M. Boyer in illustration of the circumstances which render the latter more dangerous, though he has omitted to mention two occurrences which materially add to the risk and embarrassment of that operation,—we mean the not unfrequent ascent of the arteria innominata upon the lower part of the trachea; and the convulsive action of the muscles of the neck, as described by Messrs. A. Burns and Bell. The only objection which we can anticipate to the employment of laryngotomy in such cases, is that it is less likely to answer the object in view, namely, the extraction, or rather the expulsion of the foreign body. But the experiments of Favier on living animals, recorded in the Memoirs of the Academy of Surgery, have proved that foreign bodies introduced into the trachea are drawn towards the bronchiæ during inspiration, and driven towards the glottis during expiration; that they are expelled and driven out by expiration, as soon as an opening has been made in the trachea large enough to admit of their passage. M. Boyer alludes to these experiments for the purpose of proving that the fear of being unable to meet with, and extract the foreign body, cannot be a sufficient motive for declining the operation of bronchotomy; but surely they will also prove, that the object proposed may be effected by means of an opening of sufficient size in any part of the respiratory passage, and allow us to choose between the difficulties and dangers of tracheotomy, and the comparative facility and safety of laryngotomy.

Systematic writers on surgery, in general, seem not to have taken sufficient pains in discriminating the particular cases requiring the performance of these two operations. Notwithstanding the indications for each appear to be pretty decidedly marked, at least in the greater number of cases. Thus tracheotomy is exclusively called for in the instance of a foreign body fixed in the œsophagus and impeding respiration by its pressure on the trachea. In cynanche laryngea too, and other affections of this part, tracheotomy is preferable to laryngotomy, as it would of course be desirable that the seat of the operation should be as remote as possible from that of the disease. On the other hand, in inflammations of the mouth and throat, either primary or consequent upon wounds, &c. (provided always that the larynx be unaffected); for the purpose of inflating the lungs in

suspended animation; and for extracting a foreign body lodged in the trachea, as our object is merely to make an opening into some part of the air-passages, it would be a matter of indifference, as far as the purpose of the operation is considered, whether we selected the larynx or the trachea; but as we know that the incision of the former is less hazardous to the patient, and more easy to the operator, every motive combines to direct our choice to it.

It only remains to say a few words of the case of CROUP, which some have supposed likely to be relieved by making an artificial opening for respiration. We may safely say, that when this disease really exists with the exudation of lymph into the trachea, and most probably with a simultaneous affection of the lungs, it is sufficient to produce death,—the result of any operation for the purpose of restoring respiration must be more than doubtful. This is a disease, as every one is aware, only to be relieved by active treatment in its early stages. But as it is our duty to do every thing that affords a shadow of hope, bad as the prognosis must always be, it is better to attempt something than allow the patient to perish unrelieved. In such cases nothing would be gained by opening the larynx, which is above the seat of the impediment to respiration. We must cut into the trachea at the lowest point of it that can be reached, consistent with the security of the important parts placed in its vicinity.—We say the lowest point, because there is a chance that the disease, at least its greatest intensity, might be confined to the upper portion of the tube, though, we believe, it will be more commonly found to extend downwards to the lungs. We may repeat, in conclusion, the assertion with which we commenced on this point, that there is little prospect of relief in true croup, from making an artificial opening for respiration.

Tracheotomy and not laryngotomy is the operation required for the relief of the inflammation of the glottis and larynx, caused by an accident that sometimes happens to children—drinking boiling water from the mouth of a tea-kettle, supposing it to be cold (See *Quart. Journ. For. Med.* ii. 235.; and for MR. WALLACE'S *interesting case*, iv. 299.) After what we have already said, and looking to the parts affected in this case, it is unnecessary to assign the causes of this preference, and the reasons of our dissent from the recommendation of laryngotomy as above quoted.

We have already expressed our opinion of the value of the volume before us, and we feel much pleasure in adding, that it does equal credit to the author, and to the school of surgery of which he is the greatest ornament.

M. Kergaradec on Auscultation in Pregnancy.*

No arguments are required to prove the uncertainty of the symptoms on which all attempts to ascertain the state of pregnancy are founded. Those who are most conversant with the subject will at once assent to this proposition, and disclaim a precision to which, whatever some individuals may suppose, we have at present no title. Such being the case, every attempt to improve our knowledge merits attention and impartial experiment. The name of M. Laennec, and the peculiar means adopted by him for extending the diagnosis of thoracic diseases, are perfectly familiar to the profession in this country. (See *Quart. Journ. For. Med.* ii. 51.) M. Kergaradec's Memoir is founded on the application of this plan to a subject not originally contemplated by the discoverer. The circumstances which led him to his researches on this subject, were the following.

Being in attendance on Madam L—, a young woman who had been some months pregnant, he resolved to assure himself if it was possible to hear the noise caused by the agitation of the fluid of the amnios when the fœtus moved in the uterus. His investigations on this point gave him no satisfactory result, though in other respects they were more successful. One day, when Madame L—— had nearly gone her full time, M. Kergaradec, whilst attending to the motions of the fœtus, was struck by a sound to which he had not until then attended, and which resembled the ticking of a watch placed very near his ear. On removing his ear from the abdomen the noise altogether ceased. The experiment frequently repeated gave the same result. By attention he recognized a double pulsation recurring at regular periods, like the contractions of the heart. On counting them, they varied from 143 to 148 in a minute, whilst the pulse of Madame L—— was but 70 in the same time. This difference in the number and the situation of the pulsations rendered it impossible to confound them with the pulse of the mother. The practical and theoretical consequences of this discovery immediately presented themselves to the author, and led him to repeat his experiments during a fortnight which elapsed before Madame

* Memoire sur L'Auscultation appliquée à l'etude de la Grossesse, ou Recherches sur deux nouveaux signes propres a faire reconnoitre plusieurs circonstances de l'etat de Gestation. Par M. J. A. Lejumeau de Kergaradec, D. M. P. &c. 8vo. Paris, 1822.

L—— was delivered. The principal facts he observed were the following :—

The double pulsations in question were heard in the left part of the abdomen ; they extended about a foot in a vertical direction from a few inches below the umbilicus to a little above the crural arch ; they were much more limited in a transverse direction. Their greater or less intensity afforded the means of judging of the proximity or remoteness of the point at which they were situated : this point varied a little. The fœtus appeared to be inclined to the right side, where a projection could be felt through the integuments corresponding to the lower extremities. During the fortnight the mother's pulse varied from 54 to 72 in a minute ; that of the child also varied from 123 to 160. There was no constant relation between them as to their frequency ; on one morning, however, after some very brisk motions of the fœtus, its pulsations attained the maximum of 160, and at the same time Madame L——'s pulse reached the maximum of 72.

But besides these pulsations, M. Kergaradec derived some additional information from the employment of auscultation. One day, whilst endeavouring to hear the beating of the heart of the fœtus on the right side of the abdomen, he distinguished simple, regular pulsations, perfectly isochronous with the pulse of the mother. Their force was such that they seemed to arise from very large vessels, or from several vessels at once. They were accompanied by a particular noise, which resembled the rustling (souffle) observed in certain diseases of the heart and great vessels. They were confined to a very narrow space on the right side below the umbilicus : they were not sensible in any part of the left side. It was evident that they were not owing to the pulsations of the heart of the fœtus. The conclusion which M. Kergaradec drew was, that from their situation and other circumstances they bore some relation to the point of insertion of the placenta. These pulsations were not sensible at all times ; they frequently disappeared and returned after a suspension of some days, a circumstance which the author attributed to the variations in the position of the fœtus with relation to the placenta. During the pains of labour, and when the os uteri was dilated to the size of a three livre piece, the pulse of the mother was 85, that of the child 136 to 139, and situated lower than usual, quite at the bottom of the abdomen, almost in the median line. The simple pulsations with the rustling, were also very perceptible, and altogether confined to the right side. Three hours afterwards, labour had made considerable progress, the child having entered the hollow of the pelvis, the pulsations

of the heart of the child could still be perceived, but not the pulsations referred by the author to the placenta. In about two hours Madame L —— was safely delivered of a strong and healthy child.

In a second CASE of a woman, who by her own account had reached the fifth month of pregnancy. M. Kergaradec was unable to distinguish the pulsations of the heart of the fœtus, but the single pulsation with rustling was very perceptible.

In the eighth observation M. Kergaradec examined at the Hôpital Necker, in the presence of M. Laennec and several other physicians, a woman in the sixth month of pregnancy, whose abdomen appeared very little enlarged. The pulsations of the heart of the fœtus only could be distinguished, and these were very faint, occasionally disappearing during the examination. Three days afterwards, M. Laennec heard them much more distinctly, and at the same time discovered the simple pulsations with rustling. These last were perceptible in the left part of the abdomen, in a line extending from the umbilicus to the crista of the ilium. M. Laennec has since frequently repeated the same observations, and demonstrated them to some strangers, and to the students who follow his visits. Once he was unable to distinguish the simple pulsations with rustling, and at another time neither these nor the pulsations of the heart of the fœtus. At one time, whilst the woman on whom these observations were made was calm and her pulse regular, M. Laennec remarked a sudden increase in the action of the heart of the fœtus. The sound almost equalled that of the heart of an adult, but without any impulsion or irregularity. M. Kergaradec explains the cases in which he was unable to distinguish the double or single pulsations in question, by remarking, that most of these observations were made in haste, on women while in the erect posture, and covered with their clothes ; and by the impossibility of procuring a perfect silence around him. In general he distinguished them with equal ease, simply by the application of the ear, or by the use of the stethoscope.

In a different part of the Memoir, M. Kergaradec gives some additional facts. In his first observations, the double pulsations, or those referred to the heart of the fœtus, were heard on the opposite side to that towards which the inferior extremities were directed. He observed the contrary in a case where the uterus was inclined quite to the right side. It had appeared, that the situation of the simple pulsations (those of the placenta) were very circumscribed, and that they were met with on the opposite side of the abdomen to the double pulsations. In a visit to the Hospice de la Maternité with MM. Lens and Laennec, he found

the space occupied by the simple pulsation much more extended than in the first observations. In a female, at the eighth or ninth month of pregnancy, the seat of this simple pulsation (of the placenta) appeared to be the anterior part of the abdomen, below the umbilicus, and extending to the right and left of the median line. The contractions of the heart of the fœtus could only be distinguished on the right side. They were not very strong, and evidently traversed the part where the simple pulsations with rustling were felt. The inference drawn from these circumstances is, that the placenta was fixed to the anterior part of the uterus, and that the child was placed behind it.

In a woman who had only reached the fifth month, the simple pulsation was felt with great force at the lower part of the abdomen, a little to the left; that arising from the heart of the fœtus was not perceptible. M. Kergaradec explains these facts by the comparatively greater developement of the placenta than of the fœtus in the early periods of pregnancy, and by the consideration that in most instances the former is attached to the fundus of the uterus, and thus presents itself to the ear of the observer, whilst the child is placed in the lowest and most remote part of the uterus.

M. Laennec pointed out to the author one case, in which the pulsations of the heart of the mother, were perceptible at the middle of the left side of the abdomen. This woman was in her eighth or ninth month, and without any appreciable organic disease. In another female, at the same period, these pulsations were perceptible at the lower and right part of the same cavity; but in this instance, the heart was evidently in a state of hypertrophia with dilatation. It is not necessary to remark, that the difference in the number of these pulsations rendered it impossible to confound them with those of the heart of the fœtus.

M. Kergaradec next points out some of the principal advantages likely to be derived from the application of auscultation to the study of the circumstances connected with pregnancy. By this means, it appears possible to acquire some certain information as to the existence or absence of the state of pregnancy, and particularly as to the vitality of the child. Of course, the absence of the pulsations of the heart of the fœtus will not afford a sufficient proof of its death, as this phenomenon may depend upon its position, and other circumstances. On the other hand, the presence of these pulsations will be decisive evidence of the state of pregnancy, and the vitality of the fœtus. He supposes, that it may be possible, in this way, to ascertain the effects of the moral and physical affections of the mother upon the child; to discover the existence of twins; the posi-

tion of the child in the uterus; the point of attachment of the placenta to this organ previous to the performance of the cæsarian operation; the existence of extra-uterine pregnancy, &c.

M. Kergaradec remarks, that some of these are founded on such rational principles, that he considers them as positive facts. The greater number, he fairly allows, are simple conjectures, to be established or rejected according to the results of future experiments, and for this purpose he indicates certain subjects for inquiry; as the period at which the pulsations become perceptible; the ratio of their variations in different circumstances, &c.

In a postscript the author gives an extract from an article by Professor Fodéré, in the Dict. de Sciences, Med. Vol. 57, who relates the fact that M. Maoir, of Geneva, had discovered that it was possible to recognize the vitality of a child when nearly at the full period of gestation, by the application of the ear to the mother's abdomen, when the pulsations of its heart may be easily distinguished from those of the mother. Though this remark excludes M. Kergaradec's claim to priority, it affords a very interesting and unexpected confirmation of his researches. M. Maior's observations are confined to the latter part of pregnancy, and he says nothing of the simple pulsation (of the placenta). M. Kergaradec's Memoir terminates with the approbation of a Committee of the Academy, and three cases by M. de Lens, in support of his observations.

M. Fodera, in Magendie's Journal de Physiologie, (ii. 112), just received, is of opinion, that auscultation may yet be applied to many other departments of medical diagnosis, than has yet been done; for example, in urinary calculi, in fractures, and in ascertaining the state of the abdomen, as in the case of colica pictonum, whether there be a contraction of the intestines, or whether they contain gas.

In opposition to the doctrines of M. Kergaradec, he mentions several anatomical facts connected with the uterus, and proved by his own experiments. In confirmation of the opinion of anatomists, he has repeatedly injected the placenta, and found that the wax passed with ease from the arteries into the veins, and from the veins into the arteries, but never the smallest portion of it reached the uterine surface of the placenta, except when it was torn. The rustling (*bruissement*) cannot arise solely from superfœtation, for M. Kergaradec's own experience proved, that the woman, whom he supposed would have twins, had only a single child.

M. Fodera seems to shew little favour to the boasted instrument of Laennec, and asserts that the same sounds may not only be perceived by the naked unassisted ear; but in most

cases, much more distinctly than by means of the stethoscope;—nay, in many cases, and particularly in pregnancy, the pulsations, and the rustling, may be perceived directly by the ear, when they can not be heard through the stethoscope, whose inconvenient length smothers the sound. He only advises the use of the stethoscope, when it is inconvenient to apply the ear directly. To estimate the value of the instrument, he proposes the simple experiment of holding a watch between the hands, so that the sound of it may be propagated, not through the air, but through the substance of the hand, and in this state of things to apply the stethoscope to the back of the hand. Without the instrument the sound is clear; with it, the sound is muffled and feeble. This, it would appear, must settle the question.

M. Rostan, (*Dict. de Médecine*, ART. *Auscultation,*) is still more incredulous of this mode of diagnosis, than M. Fodera; and gives many instances in which all the signs pointed out by M. Laennec, were distinctly present, and not one of the symptoms of which he says, these are the indications. M. Rostan, however, thinks it has done good, from the minute inquiries to which it has given rise.

ON THE NOMENCLATURE OF OFFICINAL PREPARATIONS, BY M. HUFELAND.*

PROFESSOR Hufeland is too late with his address. Fifteen years ago, Dr. Bostock published remarks very similar,† but his success was exactly what we venture to foretel will be that of our author, though it seems he has had influence enough to obtain the unanimous opinion of the Medico-Chirurgical Society of Berlin in his favour. In Germany, Prussia, and some other parts of the continent, the new nomenclature has not indeed been so universally adopted as in France and Britain; but the influence of the French and British medical authors is of late become so extensive, that the new nomenclature must be under-

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* Invito a tutti i medici sulla necessità di conservare il nome officinale dei medicamenti; del Signor HUFELAND, M.D. &c.—*Translated from*, Adresse à tous les Médecins, &c. 12mo. Berlin, 1s.

† Remarks on the Reform of the Pharmaceutical Nomenclature. By John Bostock, M.D. 8vo. 1807.

stood by all who read their works; and we have no hesitation in saying, that its superiority is such that it will always, where it is understood, be preferred to the vagueness and uncertainty of the old. We grant M. Hufeland that inconveniences do arise from the change, but we are not quite sure whether greater inconveniences are not produced by the mode which he proposes.

One of his objections to the change is, that the writings of one age and country come not to be understood in another. We repeat, that his objection comes too late; for if we are, as he wishes us, to discard the chemical terms, and go back to precipitates of Mars, and sublimates of Saturn, instead of oxides of iron and lead, we ask him what is to become of the great number of valuable medical works which have been published within the last twenty years, in which the new terms are adopted? Are they all to be banished from our libraries? or are new editions of them to be got up, with the new terms *done* into the old? We wonder much why these queries were not thought of and answered by M. Hufeland before he ventured upon so hopeless a field.

We fully agree, however, with our author, that at least some degree of uniformity should be observed when the new names are adopted, though this is very far from being the case, and is not likely we fear ever to be remedied,—considering the waywardness and caprice of human invention. We were not aware, indeed, of the extent of the evil, though many instances of it had repeatedly struck us—till we saw it pointed out by M. Hufeland. A few of his examples will put the objection in a very strong light.

Cremor tartari, is called in the Austrian Pharmacopœia, tratris lixivæ acidulus depuratus. In the Russian, supertartras potassæ. In the Prussian, tartarus depuratus. In the French, tartris acidula potassæ.

Spiritus mindereri, is called in the Austrian, acetas ammonii liquida. In the London, aqua ammonii acetata. In the Edinburgh, aqua acetitis ammoniæ. In the Prussian, liquor ammonii acetici.

Nitrum, is called in the Austrian, nitras lixivæ. In the Russian, nitras potassæ. In the Prussian, kali nitricum. In the London, kali nitratum. In the French, deutonitras potassii.

Mercurius sublimatus corrosivus, is called in the Austrian, murias hydrargyri corrosivus oxydatus. In the Russian, murias hydrargyri oxydatus. In the Prussian, hydrargyrum muriaticum corrosivum. In the Edinburgh, murias hydrargyri. In the French, murias hydrargyri superoxygenatus. In the London, hydrargyri oxymurias.

Calomelanus, is called in the Austrian, murias hydrargyri mitis. In the Russian, murias hydrargyri oxydulatus preparatus. In the Prussian, hydrargyrum muriaticum mite. In the Edinburgh, submurias hydrargyri. In theFrench, murias hydrargyri dulcis—protochloruretum hydrargyri.

Hepar sulphuris alcalinum, is called in the Austrian, sulphuretum lixivæ. In the Russian hydro-sulphuretum potassæ. In the Prussian, kali sulphuratum.

Sal mirabile Glauberi, is called in the Austrian, sulphas sodæ crystallisatus. In the Russian, sulphas sodæ. In the Prussian, natrum sulphuricum.

Tartarus vitriolatus, is called in the Austrian, sulphas lixivæ. In the Russian, sulphas potassæ. In the Prussian, kali sulphuricum. In the French, deutosulphas potassæ.

Alcali vegetabile, is called in the Austrian, carbonas lixivæ alcalinus. In the Russian, sub-carbonas potassæ. In the Prussian, kali carbonicum.

Alcali minerale, is called in the Austrian, carbonas sodæ alcalinus. In the Russian, sub-carbonas sodæ. In the Prussian, natrum carbonicum. In the Edinburgh, carbonas sodæ. In the London, natron præparatum.

Tartarus emeticus, is called in the Austrian, tratras lixivæ stibiatus. In the Russian, tartras stibii et potassæ. In the Prussian, tratarus stibiatus. In the London, antimonium tartarizatum. In the Edinburgh, tartris antimonii.

Cuprum ammoniacale, is called in the Austrian, sulphas cupri ammoniacalis. In the Russian, sub-sulphas cupri et ammoniæ. In the Prussian, cuprum ammoniatum. In the Edinburgh, ammoniaretum cupri.

Liquor anodynus Hoffmanni, is called in the Austrian, spiritus ætheris sulphurici. In the Russian, æther sulphuricus alcoholisatus. In the Prussian, spiritus sulphurico-æthereus. In the London, spiritus ætheris vitriolici. In the Edinburgh, æther sulphuricus cum alcohole. In the French, alcohol sulphuricum distillatum.

Sulphur antimonii auratum is called in the Austrian, oxydulum stibii hydrosulphuratum aurantiacum. In the Russian, oxydum stibii hydrosulphuratum præcipitatum. In the Prussian, sulphur stibiatum auranticum.

These examples are quite sufficient to point out the evil, which is certainly of sufficient magnitude; but we confess we can see no practicable remedy,—unless a grand diplomatic council were appointed, for Europe and America, to meet and construct a uniform pharmacopœia. Even in this case we do not think it the least probable, that such a council could easily be brought to agree on disputed points. It is quite clear that our author's

proposed remedy would not remove a particle of the evil. It is not, however, in pharmacy alone that the evil exists. In every department of natural history, mineralogy, botany, and zoology, as well as in chemistry, we have the same inconvenience to struggle with, and the only manner of obviating it which has yet been devised, is the construction of a copious list of synonimes. A little work, with the synonimes of officinal preparations, similar to Allan's synonimes of minerals, would, for this purpose, be exceedingly useful; and M. Hufeland would, we think, have employed his time better in compiling such a work, than in making the unavailing complaints and the idle proposals in the pamphlet before us.

Marx on Morbus Caeruleus.*

An interesting case of this disease fell under the care and observation of M. Marx; it is thus detailed by him:—

Rudolphus Behrends, born of healthy parents, enjoyed good health until he was eleven months old, only the ends of his fingers were swollen into a soft tumour,—a peculiarity which was hereditary; he was also pale, and breathed quick, and his extremities were cold. When ten months old, having irritated his mother by causing some degree of pain while at the breast, she struck him on the back with her hand. Immediately the child's limbs became rigid, the face swelled, and the whole body assumed a blue tinge; convulsions came on, and continued for five hours. After fourteen days, without apparent cause, these returned, and from this time the blue colour became more remarkable, and the breathing more laborious.

In this manner the child dragged on its existence for six months, when it became so weak, that it could not leave its bed. The complaint being conceived to be pneumonia, leeches and laxatives were prescribed, by which the child somewhat recovered, but the blue colour remained; the child afterwards got worse.

Some time after this, it was brought to the infirmary, where

* Morbi Caerulei Exemplum Memorabile. Auctore Guil. Franc. Ign. Marx. Berolini.

it became a patient of M. Marx, who at once perceived the nature of the disease.

It had now completed its second year, was of proper size, and well fed; the head, however, was large, and the fibres of the body relaxed; the swollen submaxillary glands shewed a scrophulous constitution; the vertebræ were some of them prominent; the lumbar part of the spine curved; the right thigh was also half an inch longer than the left, and the extremities were cold; respiration was quick, but did not seem either anxious or deficient; under any exertion, however, violent paroxysms of dyspnœa came on, with sense of suffocation; the action of the muscles was weak, the child being easily fatigued; the bowels were constipated, and blood was sometimes discharged; there was little appetite, and a disposition to eat chalk. Yet the child shewed strong symptoms of sensibility and of mental energy; sometimes also it was exceedingly cheerful, and slept well at night, breathing deeply, while the face and extremities were pale and chilly, and the forehead bedewed with cold sweat; when it awoke, there was a fit of anxious breathing, the face and limbs becoming again blue. The marks of a paroxysm were, the child throwing itself on the ground, with tumid face, eyes prominent, quick and oppressed breathing, amounting almost to suffocation; rigid and contracted muscles; quick, irregular and intermittent action of the heart; the blue colour of the skin approaching to black.

There is little doubt, from the affection of the breathing, which was evident from the first, that the cause of the disease was congenital; but it is probable that the enlargement of the head took its rise from the stroke which it received from its mother. Although in such cases of original mal-structure of the heart, medicine is of no avail in removing the symptoms, yet much may be done to alleviate them. With this view, the parents were desired to keep the child tranquil, that the exciting causes of the paroxysms might be avoided; to give it vegetable cooling food, and cherish the body with moderate warmth; in the paroxysms, to place it in a position favourable to respiration, and to rub the extremities with flannel. Conceiving, from the imperfect circulation through the lungs, the blood to be deficient in oxygen, substances abounding with it were administered, as in the following formula:—

℞ Acidi Muriatici Oxygenati ʒij.
Aquæ destillatæ ℥iv.
Syrupi Rubi Idaei ʒi.
M. S. Secunda quaque hora sumatur cochlear.

This acid was also added to a warm bath, the daily use of which

was followed with a diffusion and equalization of temperature throughout the body, with gentle perspiration, less rapid breathing, and with removal of the blue colour of the skin. Bark and madder were at the same time exhibited, on account of the scrophulous affection, by which means the child became much better; the curvature of the spine was lessened; he could walk about for a whole day; and the blue colour could only be perceived in the phalanges of the fingers.

After three months, the child became again ill, from the cold and moist weather which prevailed; and the acid losing its power, the oxide of manganese was tried, in the dose of five grains three times a-day. This promised well at first, but in a few days the little patient began to lose flesh, was sleepless, and had great oppression of the chest. The acid was again resorted to, but in vain; the emaciation and weakness increased; sopor or convulsions, alternately affected it; the pulse became sluggish, by and by intermittent, and scarcely to be felt; respiration was quick and panting; at last, in a state of coma, it expired.

On DISSECTION the heart was found enlarged, and turgid with blood, and the coronary vessels so full and distended, that they seemed ready to burst. Contrary to what is usual, both auricles and ventricles were filled with black blood; and on opening the right ventricle, the finger passed without any obstacle into the left; the right auricle also communicated by a large aperture with the left; and the septum between the right and left sinus venosus was wanting, so that the heart when taken out appeared to consist of only one auricle and ventricle. A fold of membrane, which seemed the remains of the septum of the auricle, arose from the lower part of the sinus venosus of a falx-like form, ending above the mouth of the vena cava superior. Where the inferior cava enters the sinus, the aperture of the vena magna galænæ was seen large, elongated, and furnished with the double valve of Thebesius; there was no vestige of the Eustachian valve. The walls of the ventricles were of equal thickness, and very strong, compared with the size of the heart. Instead of the septum ventriculorum, there depended from the base of the ventricle a thick and white membrane, from the edges of which several chordæ tendineæ took their origin, and were inserted into two large nipple-formed muscles, fixed to the apex of the heart. The aorta, compared with the other vessels, was larger, and the pulmonary artery smaller, than usual; the lungs were pale, and almost destitute of blood.

If we compare the structure of this heart with other malformations, we find the deficient septum of the auricles, or open foramen ovale, very often conjoined with a contracted pulmonary

artery and an open ductus arteriosus. In forty out of seventy-three cases described by Meckel, the septum cordis was perforated. Where this occurs, the aorta is often found to arise from each ventricle, and the pulmonary artery is altogether contracted. A case very like the one here described is given by Dr. Farre, (*Pathological Researches, Essay* 1. *London*, 1814,) in which the heart had only one auricle and one ventricle. Respiration in this infant was difficult from the first, and it only survived forty-nine hours; the skin was pallid and blue.—In another child, the aorta and pulmonary artery both arose from the left side of the heart. Dr. Wilson found the heart of a boy who died in the seventh day of this disease to be furnished with only one auricle, and without any septum cordis, the pulmonary artery arising from the aorta—(*Phil. Transactions*, Vol. LXXXVIII.) It is very rarely that any transposition of the arteries is observed. One, however, occurred, (*Baillie's Morbid Anatomy*,) in which the aorta arose from the right, and the pulmonary artery from the left ventricle. By this structure, the blood returning from the lungs was again driven back to them. A case of this kind also occurred to Mr. Langstaff and Dr. Farre.

There is little doubt, says M. Marx, but that in our patient the blood passed directly from the right into the left ventricle, from which its return was prevented by the valve which, attached to two large muscles, was placed in the middle of the heart, Corvisart first showed that this might take place; but the first instance is recorded by Richerand, in his Noveaux Elémens de Physiologie, in which the blood was forced from the right into the left ventricle through an aperture of the breadth of half an inch, whence it was prevented from returning by a fleshy pillar which closed up the aperture; the ductus arteriosus was open, and the walls of the ventricles were of similar thickness; the heart was that of a man whose skin had been always blue, and his flesh of relaxed fibre, and who could only sleep in a sitting posture. He died in his forty-first year.

Foreign Criticism on English Practice.*

Critics seldom confess, though they often shew, ignorance concerning the works which they undertake to examine. Of the ignorance of the Foreign critics named below, we have to complain, chiefly from their imagining errors and deficiencies in our schools and in our practice; and without further proof than the delusions of their own fancies, commence their attacks on our hospitals, our institutions, and our principles; and, of course, in their own estimation, come off triumphantly.

M. Eusèbe de Salle has a decided partiality for the doctrines of Broussais, who, "at a propitious moment for innovations, has vouchsafed to appear on the medical horizon," and with such splendour too, "that at length the English physicians have turned their eyes to France, and are keenly zealous to collect doctrines so simple and so capable,—'de débrouiller le chaos pathologique que la théorie des élémens modifiée par les Solidistes.'" He has not, however, a very high opinion of English candour, for though we are so eager, as he says, to learn the doctrines of Broussais,—as soon as we come to know his opinion of us, we will wreak upon the theory the resentment which we feel against its author!! The critic must certainly have fancied this from his own notions of honourable conduct. M. De Salle, however, is far from thinking that the criticisms of Broussais on English medicine are not just, though Broussais has not made a complete exposé, but exhibited only one side of the medal. Some of the charges are, that we abuse the use of calomel; that we give irritating purgatives in acute inflammation; that we dose with a hardihood which the French have not yet learned; and that we do not inquire into the particular organs affected in any particular disease.

He gives a very melancholy picture of the three schools of London, Edinburgh, and Dublin, where the spirit of intrigue

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* Litterature Médicale Anglaise. Par Eusèbe De Salle. Revue Médicale, Janvier, 1822.

Magazin der ausländischen Literatur der gesammten Heilkunde, &c. herausgegeben von Dr. G. H. Gerson, und Dr. Nikol. Hienr. Julius. From January to April, 1822.

De Congruentia et Discrepantia inter Anglicam et Italiam Medendi Rationem. Auctore, Jacobo Tommasini. 8vo. Bologna, 1821.

Lettera di G. Clarke, M.D. al ch. Sign. Prof. Tommasini, &c. Roma, 1822.

Examen des Doctrines Médicales. Par F. J. V. Broussais. 8vo. Paris, 1822.

and of party often take the place of genuine zeal; and the several schools quarrelling with one another, make the public their confidants in their scandalous discussions. The London school, he says, is empirical, but gives more importance to surgery than is given at Paris. Dublin, again, which seems to suit his taste the best of the three, is crushed by the preponderance of London, and the want of medical Journals, to bring fame to their contributors. He is more copious in his remarks on what he calls the "Médecine romantique" of Edinburgh. As a proof of this, it seems, that a Dr. Stamp Edger, of whom we never heard before, has proved himself a worthy eléve of this school, by illustrating the idea of Linnæus, that vegetables have life; animals, life and mind; man, life, mind, and soul. Another worthy of the Edinburgh school, Frosbrooke by name, has been ambitious enough to take the three titles of M.D., D.D., and LL.D, and to prove himself well entitled thereto, by asserting that the mind digests; produces crises; assimilates aliments; and elaborates the germs of diseases. Such are the proofs alleged of the romantic character of the Edinburgh school, which being somewhat ricochées in London, have led Dr. W. Philip to discover that rabies is seated in the mind!! When M. de Salle, indeed, is so deplorably ignorant of this country as to quote such authors as Drs. Stamp Edger and Frosbrooke in proof of our medical doctrines, we think it quite hopeless to attempt to instruct him.

His master, M. Broussais, we have no doubt, set him the example of this mode of characterizing the medical practice of England, when, as examples of our medical practitioners, he took up, at second-hand, from garbled accounts in the French Journals, certain papers by Messrs. Newnham, Bowes, Cliston, and Rogers; and Dr. Brenan, of Dublin, and Dr. Hosack, of America. From these authentic sources, with some slight mention of a few distinguished names, M. Broussais concludes that we are incorrigible empirics; that we are ignorant of the cause of mesenteric swellings; that we have fancied a disease called dyspeptic phthisis; that we have no knowledge of chronic peritonitis, of gastric cephalalgia, and of the forms of irritation; and that we are very ill skilled in the diseases of warm countries, in so much as we stimulate in cholera and abuse purgatives. It is rather a stretch of daring, even in Broussais,—who levels all former systems to procure the heterogeneous materials of his own melange,—to pretend to give a view of English medicine, when he confesses that he is wholly ignorant of the language, and knows our works only through translation and analysis. Had his judgment, however, not been warped as it

so strongly is by his desire to build up his own chaotic edifice, we doubt not that by these means alone, slender as they are, he would have arrived much nearer the truth than he has done. Even M. de Salle admits that his own system has jaundiced his view of others, and particularly that of England. We are not, indeed, surprised at the hostility of M. Broussais when we consider that so many of our distinguished countrymen have completely anticipated him in the only parts of his doctrine which are worthy of attention. Besides, we could not well escape his vituperation, when he has spared no country, but fulminates against Germany, Italy, and even France, the severest anathemas of Val de Grace.—We shall have an early opportunity of speaking more copiously of M. Broussais and his physiological system, as he calls it.

Of the German journalists we have a very different account to give. They seem to be very partial to England, whether from the kindred genius which Madame de Stael thought she could perceive in the two countries, or from the true German spirit of taking every thing, good and bad, in order to form a huge mass of information on any particular subject, we will not undertake to say. But one fact is very striking; that a large portion of their medical journals is always filled with translations and abridgments of papers from the English journals and transactions. More than two-thirds of the journal mentioned above is taken from papers published in this country; and both Langenbeck and Hufeland have frequently their best articles from the same source. This fact alone, independent of their occasional remarks of censure, shews us that English practice is at least attracting much notice in Germany.

We come next to the medical rhetorician of Bologna,—who, more anxious to speak than to think—more eager to write and publish than to go into novel and laborious research—has chosen the state of medicine in England and Italy as a theme upon which he may hang a series of pretty paragraphs and finely turned sentences. Tommasini finds that sentence-making is well calculated for the climate of Italy:—were he in England, he would soon discover that we are more anxious for ideas and facts than for smooth-going words, and that we admire more a single argument of Demosthenes, with its rigid, clear, and overpowering demonstration, which swerves not for an instant from the subject in pursuit of pretty words; than all the flowing eloquence and luxuriant verbiage of Cicero, with whom words and figures were all, and the facts and the argument only a sort of concealed and temporary frame-work, to support his gorgeous display of wordy decoration.

We had the opinion of Tommasini concerning our schools—and an ill founded one it was—in his work on inflammation, (page 60.) where he says, that if the system of Brown had not many followers in England, "neither had that of Cullen; nor can they have any pathological science in a country where detached observations and isolated cures, unconnected by general deductions, as yet usurp the place of a theory." Now, though we overlook the gross mistake, that the system of Cullen has not had many followers in England, where to this day it is the text book of our medical schools—we cannot pass over so slightly the erroneous view which he takes of facts and theory. This view, however, seems to be a favourite with him,; for he repeats it in the work now before us, that our medical authors give little else besides particular cases and histories of diseases, without attempting to establish upon these any general principle or doctrine, forming part of a grand system.

Now, this very circumstance, which calls forth the censure of Tommasini, is exactly what we should select as the chief excellence of our schools of medicine. Without, indeed, the careful investigation of CASES, and their peculiarities modified by constitution, temperament, mode and place of living, and the complications of disease, we do not see how either Tommasini, or any other, can study the science or practice the art. For deduce general principles as you will, these will seldom avail you without you have regard to the varying circumstances which will occur in every case to which you are called. Here, then, our method is natural and accurate, while that advocated by Tommasini is artificial, and must in many cases prove inapplicable.

Besides, it is not true, that our medical writers merely detail cases without deducing general principles. Many of them are but too ready to generalize and to theorise, such as Darwin and Parry, and we could add to these the names of several distinguished living authors. But few of them are so injudicious as to attempt to establish a complete system perfect in all its parts. Such an attempt would only shew the greatest ignorance of human genius and of the nature of disease. It is utterly impossible to succeed in such an attempt, and we cheerfully leave it to the fancy of Tommasini; while we hope our countrymen will be more anxious to direct their industry to the useful observation of facts and the accurate history of cases.

Another of the grand charges brought against us is the deficiency of clinical instruction, particularly at Edinburgh, where he tells us, that the student learns nothing but the mere detail of symptoms and the medicines prescribed for these; and is not taught either to define, or recognise a disease, and neither sees

a disease investigated, nor is taught to investigate it, as in Italy. Now we differ from our author altogether in what he conceives to be of so much importance; for it is these very *definitions* of a disease which teach the student to recognise it, that are, in our opinion, the most injurious to medical education. Were diseases indeed all definable and invariable, this might be a highly proper method of instruction; but since there are really so few diseases which answer to any nosological definition, the student who has one by rote will either be tempted to make it apply in spite of discrepancies, or be quite non-plussed for want of an applicable definition. The clinical lectures given at Edinburgh and at the dispensaries in London are generally conducted on much more philosophical principles than this square and rule system of definitions which have no prototype.

Retrospective Review.

[The following communication, from its being both important and curious, induces us to postpone, till next number, our Review of the MSS. Lectures of Mr. John Hunter.—The mistakes of so great a man as Cullen are valuable, in so far as they ought to teach us great caution in giving a diagnosis.—Editor.]

Case of Sir Hugh Hamilton, of Rosehall, 1754, in which Dr. Cullen mistook Scurvy for Stone in the Bladder, *from the MSS. of* Dr. Cook, *author of Travels in Russia and Tartary; with the original Letters of* Cullen, *and notices of his Life, never before published.*

Sir Hugh Hamilton, when I first became acquainted with him, was in the sixty-third year of his age. He had been treated for many years, as if labouring under a stone in his bladder, when, in my opinion, his complaints had been all along of a scorbutic nature. His physicians were Dr. Cullen, of Glasgow, and Dr. Clark, of Edinburgh. He was of a plethoric, bilious constitution, and somewhat corpulent. He had lost almost all

his teeth by the scurvy, and before I knew him, his gums had been frequently ulcerated. His abilities were excellent; and in personal accomplishments, he had been superior to most men. For years before I knew him, he had complained of an excessive pain in his left side, and about the region of his loins, and of a weariness and breathlessness, when he walked, or used exercise in any degree more than moderate. For many years also, he had been plagued with a lepra, breaking out upon his lips, and on his cheeks and chin. For the cure of these symptoms, he had used many medicines, and consulted various physicians, but without effect. He had lived pretty freely, till within a few years of his death; but he never had been subject to venereal complaints.

I was first consulted on the 13th of January, 1753, in the absence of his ordinary physicians; at which time, he gave me a very accurate account of his complaints, and answered all my queries so much to my satisfaction, that instead of imputing his sufferings to a stone in the bladder, as his other medical attendants had done, I gave it as my opinion, that the internal coats, and sphincter of his bladder were ulcerated and much excoriated, chiefly from the scurvy. Upon another occasion, I had a consultation with his physicians, Dr. Cullen and Dr. Clark, but they made light of my arguments, and insisted upon the opinion which they had already given. In consequence of this, recource was had to soap pills in great quantity, and to lime water, with the view of dissolving this imaginary stone; whilst I was considered by these gentlemen as an ignoramus for presuming to call in question their undoubted knowledge.

After continuing the use of these remedies for a long while, all his complaints were so much aggravated, that his physicians were under the necessity of diminishing the doses. In January, 1754, Dr. Clark wrote a letter to Dr. Cullen, of which I give an extract.—"From your state of the case, I suspect there is a stone; but from the symptoms, it is so small, that there may be hopes of its passing. The bougie can do no harm, and may be of use, as a small stone always occasions a stricture. I wish he would return to the aqua calcis."

In February following, Dr. Cullen inclosed the above letter to Sir Hugh, in one from himself, of which this is a copy:—

To Sir Hugh Hamilton of Rosehall.

SIR,—I have been out the length of Tennant's on my way to wait upon you, but my mare proceeded with so much fear and trembling, that I found I could not possibly make out my journey, being obliged to be home at night; I have, therefore, put

it off, till either the road is better, or my mare better prepared for it. However, I would not delay sending you the inclosed, which I received on Wednesday. I can perceive that the Doctor depends chiefly on the lime water. I expected this, and had, therefore, told your story fully; but I fancy he hardly believes that the heat, dryness, and thirst, were owing to the lime water. I would have you try it again with milk or whey; and I fancy, there is another way of rendering it milder also, that is, in keeping the shells, of which it is made, very long in the fire, till they are perfectly white; for I have found lately, that the pieces which are any ways blackish, give a strong and disagreeable taste to the water; wherefore, the shells must either be burnt till they are perfectly white, or any blackish bits that remain should be carefully picked out. As to the bougie, the Doctor has not answered my question, which was to ask his particular experience of it in such cases. I think it possibly may be of use, but I cannot entirely agree with the Doctor, that it can do no harm; for in all the cases in which I have tried the bougie, it always, at first, gives some uneasiness, and raises some heat and inflammation. It is, therefore, to be proceeded with cautiously. I suppose Dr. Cook can provide you in bougies; and I think his assistance may be necessary in the first trials. When the bougie is first used, I think it is very proper at the same time, to drink linseed tea, or the marshmallow decoction. As I was writing, I thought it proper to write this fully, but at the same time, I intend to wait upon you, either to-morrow or Sunday. I am, Sir Hugh,

Your most obedient Servant,

Feb. 1754. WILLIAM CULLEN."

In another letter, Dr. Clark pressed the use of the bougie, on the supposition, that the stricture is occasioned by a small calculus, and he still recommended the lime water. But at last, pain, and great uneasiness, accompanied by erratic feverishness, obliged the Knight to abandon these remedies.

Not long after this, I was again consulted, and in consequence, recommended some extracts, with small doses of sal polychrest. The sal polychrest, obtained the sanction of the Edinburgh physician—but nothing else; yet the patient was, in some respects, easier from the use of it. In the spring, he was permitted to take an anti-scorbutic diet drink, but nothing else; and that, only for the short space of fourteen days, when he was hurried away to the Highlands to drink goat whey. In that short time, however, his appetite improved, and the gout, to which he had formerly been subject, made its appearance; but the continued

inclination to void urine, remained nearly in the same state, as when he left off the lime water. He remained five or six weeks in the Highlands, and during his stay there, he had at one time a violent colic. Returning home, on his way to Moffat, he had another attack of colic, so very violent as to deprive him of his senses for a time. I was then called to his assistance, and fortunately relieved him. During his stay at Moffat, he was much freer of pain; and in a letter he received from Dr. Clark, at that place, are the following expressions:—"The waters are certainly good for your scurvy, and have made a change in it for the better. I take them, likewise, to be very proper for your other complaint [The Stone]." He recommends also, the use of copaiba balsam; and that a strong infusion of lintseed should be injected milk-warm, twice a day, into the bladder. He ends his letter with some remarks, on the kind of diet best adapted for his patient; observing that "of all wines good claret heats the least, when taken in moderation; punch is not good, even though weak. Cyder and malt liquor are allowable, and sweet-whey, or sack-whey, and green tea may be drank plentifully." The letter is dated, September 6th, 1754.

Soon after his return home, a solution of gum arabie, in a decoction of marsh-mallows was injected into the urethra: I injected them twice; but the last time, observing a red colour in the urine immediately evacuate with the injection, I said, I would inject them no more; telling him, as he was just going to Edinburgh, the physicians who had recommended injection, would get it done there according to his wish.

At this time, he desired I would draw out a statement of his case, for his own perusal, with my reasons for alledging there was no stone.

The following is the substance of the letter which I wrote on that occasion:—

"As I am of opinion, that your complaints are the effect of scurvy, at least, not of confirmed stone, I shall first give the symptoms of stone, and then of scurvy, in so far as they may be applicable to your case. However, although there is no stone, it is possible you may have gravel. At the conclusion of my letter, I shall give a few hints for a general plan of cure.

"The symptoms of stone are, at first, an obscure pain in the kidneys, gradually increasing, and bearing some resemblance to colic pains; and along with this there is a frequent belching, accompanied by an inclination to vomit. The urine, for the most part, is white, purulent, and stinking, and often mixed with blood. If a stone, or sand is protruded from the kidney, it causes very sensible pain in passing through the ureters, and

in such cases the urine is often bloody. When it is in the cavity of the bladder, it causes, in such constitutions as yours, an almost continued oppression of the bladder, attended by tenesmus, and a constant desire to pass urine, which cannot be evacuated, unless the patient lie on his back, with his hips raised so high, that the stone or stones may fall to the bottom, or more depending part of the bladder, and leave the urinary passage free. But this relief is momentary: the evacuation of the urine being almost always succeeded by excruciating pain, caused by the surface of the stone tearing and brushing the internal coat of the bladder, which at such a time, is pressed hard upon the stone by, probably, a convulsive motion. Nor is there relief from pain, till the urine begins again to collect, and remove part of the stone from contact with the bladder. The pain is felt even in the glans penis, accompanied by an itching, whether the stone is in the kidney, ureters, or bladder; and it is constantly increased by driving in a coach or cart, or even by riding on horseback. If the stone is large, such exercise is quite intolerable, and the weight of the stone is sensibly felt in the bladder."

"The common signs of the scurvy, applicable to your complaints, are, a weariness or feeling of inactivity, rotten teeth and gums, and at last, a falling out of the teeth; want of appetite, a sense of fullness in the lower belly, wandering pains in the joints, and rheumatic pains between the shoulders, and through the whole body. Wandering fever is likewise present, more especially in the spring, but often at the latter end of autumn. There are tumours, and crusty scabs on the skin, and there is a great dryness of the mouth and tongue. It seizes on the internal parts, as well as the external parts of the body, and particularly on the excretory passages. Those who are infected with an inveterate scurvy, are liable to the symptoms of all chronical disorders; and to no one so much, as the continued desire of passing urine, which is particularly urgent, when the neck of the bladder, and, indeed, the whole inner surface of that organ are excoriated, which is owing, in a great measure, to the obstruction and enlargement of these glands, which used to secrete a mucous fluid for lubricating the parts, and defending them against the salts of the urine. When the neck of the bladder suffers much pain, it communicates pain to the sphincter ani, and often causes a tenesmus. As the glands become enlarged, they press strongly against one another, and against their small nerves, and more so in proportion to their magnitude. By the same cause a stupor is often produced in the sphincter visicæ, and a paralysis in the muscular fibres of the scrotum. Small cavities are also often formed between the sides of the glands,

through which the urine will drain, and be imperceptibly evacuated, especially where the pain is not extremely acute."

"The thick white urine letting fall a gelatinous sediment, and the continual desire to pass it, are the only circumstances which render the diagnosis difficult in your case. I am convinced, however, that your symptoms are not the consequence of a stone, because, you affirm that when you travel over high roads, in a wheel-carriage, or on horseback, you never have any exquisite pain, nor have your usual uneasiness increased; your inclination to pass urine being always much the same, whether you use exercise or sit still, or whether you are in an erect or horizontal posture. And, besides, you never have been sensible of any weight in any part of the bladder, whatever has been your exercise or posture, and you have never evacuated sand, at least, since I have had the honour to attend you. The best authors affirm, which is exactly agreeable to my experience, that your present complaints are often observable in scorbutic patients, but never in cases of confirmed stone, without being attended by those symptoms enumerated in the beginning of this letter. Besides, men troubled with the stone, especially when it is in the neck of the bladder, and they in an erect posture, pass urine by drops, and in exceedingly small quantities, and with extreme pain; but I have seen you, when your complaints were much the same as now, squirt out jets of urine, which certainly filled the cavity of the urethra, although you were then standing; I cannot account for this squirting of urine, when in an erect posture, in cases of stone, but by supposing the stone to be a living creature, which could advance to, and fly from, the neck of the bladder at pleasure. It may be urged that the stone is very small; but the neck of the bladder being of a pyramidal figure, were the stone ever so small, it would either be pressed by the weight of the urine close to the sphincter, so as to permit scarcely a drop to escape, or it would be pressed by the same cause into the urethra, and either stick there or be rejected; but the contrary is daily observed by yourself. The sound, is certainly the best informer in such cases; although, I firmly believe, that your complaints are the effects of scurvy. But I am ready to submit my opinion to experienced judges."

"The disease being once known, a method of cure is obvious to every one; and if it be the scurvy, remedies may be administered in all forms, even in your food and drink, in baths, fomentations, injections, and clysters, accompanied by regular exercise. I beg leave to propose, also, to the consideration of able physicians, whether issues might not be of use."

Hamilton, Oct. 25, 1754.

A few days after I had written the above, Dr. Clark in a letter to Dr. Cullen, says—" I am very apprehensive of a large calculus.—I desired him to try the balsam capaiba, on the supposition of another cause, and that it would do no harm, and was as good as any other thing, on the supposition of a large calculus, and on the same supposition, I think he ought to try the injection."

On the 20th November, Sir Hugh sent my letter to Dr. Clark, enclosed in one from himself, in which he says—" I have a frequent irritation to pass water; and of late, the involuntary passing of water, especially in the night time, has increased, without any great pain attending it." He mentions, that he had taken the copaiba balsam for a month after his return home, and that he had been, for some time past, drinking two glasses of Hartfield spa before dinner.

That letter Dr. Clark answered next day, by return of post; and in it, are the following remarkable expressions :—" If your strangury is a symptom of the scurvy, it is a symptom which I never saw, nor read of in that disease. As to the cure, he makes mention of nothing but issues, from which I cannot imagine any benefit, whether it is a symptom of the stone or scurvy. I own that you have not many of the symptoms of a confirmed stone, &c." He supposes that the neck of the bladder may be excoriated, and recommends a heating injection ; and ends his letter with saying, that sounding is the best means of ascertaining the presence of stone. As this letter was not written by a novice in medicine, but by a man at that time esteemed the first physician in Scotland, I thought it necessary to defend my opinions at some length in a letter to Sir Hugh. I referred him to Hippocrates, Bellini, Boerhaave, Van Swieten, Sinopœus, and said, that many more authors might have been mentioned. I ended my letter with the following sentence :—" That your great Archiater never observed such symptoms in the scurvy, nor read of them, may be true ; but, in that case, his practice must have been strangely confined, and his reading most superficial."

Soon after this having gone to Edinburgh, I waited on Sir Hugh, who informed me that he had been injected once, but with so much pain that he would not again submit to it. At the same time I consulted with his other physicians, but to very little purpose, for the only medicine ordered for him was a small dose of tar pills. In short, he contracted a remittent fever, with a total loss of appetite. He was now not able to retain so much urine as formerly. He complained of increased pain in the penis, and he voided small quantities of blood occasionally with his urine.

In April, 1755, he returned to the couuntry, where he was visited by Dr. Cullen, who wrote the following letter to him, which I shall give entire, as being the composition of a man who has since attained considerable celebrity :—" Instead of talking with you yesterday, I chose rather to give you the trouble of this letter, that I might recollect more fully what is proper to be said, and also say it more distinctly.

" With respect to your principal ailment, I have no remedy that I can offer with confidence, else it had been proposed long ago, but I think you should be in the constant use of some emollient and mild diuretic, which may give some relief. Such as the decoction of marshmallow and parsley roots, to which the herb pelletory of the wall will be a useful addition. It is common to make the decoction pretty slimy, but in that way it will hardly agree with the present state of your stomach. I would, therefore, make it weak of the marshmallows at first, and increase the strength of it as your stomach will bear. You should drink a bottle of such decoction every day. You may take it at any time you please; but I fancy you will bear it best in the afternoon and evening. It is usual to sweeten such decoctions with liquorice, but it will be lighter and more diuretic with honey. The costiveness you complain of at present should be removed, and carefully prevented for the future. At the same time it is to be observed, that as all purgatives are heating, you ought to use only the gentlest laxatives. On account of the piles, sulphur seems to be a proper remedy, but it will be more effectual, if some vitriolated tartar, or sal polychrest is joined to it, and both mixed with pulp of cassia, or prunes, or honey. I commonly give a drachm of sulphur and half a drachm of salts, but the dose, and even the proportion of the ingredients, must be varied as circumstances require. I find this particular advantage in such a medicine, that it is not only a cooling medicine, but that it leaves no astringency behind it, which rhubarb, and every other purgative does. As I would avoid employing a large dose, it will be proper to assist a gentle one, by taking some both with prunes or raisins at dinner.

" Your diet at present should be very light and cooling. At dinner, you may take a bit of any plain meat your appetite will allow, but you should avoid every thing heavy, such as all baked and fried meat, pigeons, salmon, and almost all fish. I think your chief food should be weak broth of chicken, veal, or neck of mutton, with greens and milk meats; these are most suitable to the present state of your appetite, and necessary while the feverishness continues. While your appetite is weak, and you can take but little at once, you do well in taking frequently, and

even at night, a glass of hartshorn jelly and a biscuit. I would willingly recommend to you, in the morning to try a little new-churned butter milk. If it agrees with you, it will carry off your fever more effectually than any thing I know; and it will have a good effect on your urine. But it may be too cold, too heavy, and too purgative, and therefore I would have you take a little only at first, and proceed by degrees. The best time to take it will be, when you first get up in the morning, taking your ordinary breakfast about half an hour afterwards. What is chiefly to be depended upon, for taking off the fever that hangs about you, is daily exercise; this, therefore, you should obstinately persist in; but I must take notice, that though hardly any weather should make you miss a day, yet while the north-east winds blow, you should lay aside the curricle, and take the close chariot. You should be abroad two or three hours every forenoon. It is possible you may find it necessary to increase your exercise by entering on a journey at some length; but more of this hereafter. The above is of small importance, perhaps, but what my great anxiety for your present distress suggests to me."*

April, 1755.

I delayed giving him any thing, in this state, notwithstanding his utmost solicitation, as I was apprehensive of his sudden death, which might have been imputed to me. At last, however, by the desire of his relations, I prescribed a diet drink for him, which he used from the 26th May to the 26th July. Soon after commencing this course he had a fit of the gout, had his appetite, and imagined he was in a fair way of recovery; and indeed, so long as he continued to use the medicines daily, he seemed to be much freer of complaints. On the 26th July he gave over my plan, to see what his natural faculties could do; but soon after that, a swelling of the scorbutic kind, made its appearance in the raphe, about two straw breadths from the place, where the prepuce joins the neck of the glans penis. This continued to increase in bigness, and at last, on the 15th of August, it burst, and through the orifice unconcocted matter was evacuated, of a pale blue colour, mixed with some blood and urine. After labouring under great distress, he died on the 1st September, having the day before his death given orders that his body should be opened, in order to find out the true cause of his death.

This was accordingly done on the 3d of the same month, in

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* It appears from this letter that Dr. Cullen had been perusing Faustus de Scorbuto.

presence of Dr. Cullen, two surgeons, and myself. From the orifice of the ulcer, a sinuosity stretched to the neck of the urinary bladder, betwixt the cutis and urethra, which last it perforated in three different places. The vesiculæ seminalis could hardly be detected, though not ulcerated; the neck of the bladder was quite ulcerated and excoriated; the sphincter muscle was destroyed. On the right side of the neck of the bladder was a small tumour, which when pierced let forth about half an ounce of very fetid, mixed, purulent matter; and on the left side was a small schirrous tumour, about the bigness of a pigeon's egg. The cavity of the bladder was very small, and could not have contained a hen's egg; the internal coat was in many places perforated; betwixt which and the external coat ran many sinuosities, communicating with one another. The cavity was of a black colour. The ureters at their entry into the bladder were wide enough to receive the end of a very large catheter. Both the kidneys and glandulæ renales were very callous, even like grisle; the spleen was also callous, and the external surface, very uneven and rough, of a livid colour; the liver was also indurated and discoloured in some places, but not universally; and many of the mesenteric glands, which in a natural state are not visible to the naked eye, were rendered very large and hard. In the cavity of one of the foveæ of the right kidney, we discovered an exceedingly thin piece of calcareous substance, not bigger than a small oat chaff, and so soft that, somehow, it was lost; and this was the only stony substance found in the body. Before we began to dissect the body, a catheter was introduced into the bladder; and so keenly was Dr. Cullen's imagination fixed upon the supposed cause of a most inveterate disease, that when the bladder was laid open, and no stone discovered, *he could scarcely be reconciled to his senses.*

Might not this gentleman have lived longer had he been treated from the beginning of his uneasy complaints with proper detersive and emollient vegetables and antiscorbutics?

Was not his disease increased by the long continued use of so pungent a diuretic as lime water?

I answer both these queries in the affirmative. But how often will men of learning, experience, and reflection, as in this case, rather hazard the recovery of their patients than confess their error. Lime water, I believe, may in many cases be useful, but I presume that the learned authors, who first recommended it, never meant that it should be a Catholicon, or a cure for all diseases. I could give cases where it appeared to me to be hurtful; and one in particular, where it caused the epidermis to fall from the penis, scrotum, groins, and parts adjacent, with such pain as usually attends blistering.

Lime water being a diuretic remedy, and abounding with acrid particles, must be hurtful where there is much acrimony of the juices, and where the urinary passages are excoriated, or in a state of irritation; but when the fluids of the body are in a viscid state, and the solids dull and inactive, lime water prescribed in a quantity adequate to the disease, may prove a most benign and saving remedy, by supplying the wanted stimulus to the vessels, and by removing any thing deleterious from the blood, by insensible perspiration, or by urine.

How reprehensible is that physician who carelessly believes every thing that is said of a new remedy; who takes a solitary symptom as a proof that a dreadful disease is present; or who shuts his eyes against the truth, however clearly it may be pointed out to him by some other physician of experience. The reader cannot fail to have perceived, from the extracts I have given of his letters, how incoherent and unsettled were the notions of Dr. Clark concerning the disease of Sir Hugh Hamilton; saying at one time that there was a small stone; at another, a large stone; and again, uncertain whether there was a stone or not. His letters, indeed, shew, that though he was esteemed the first physician in Scotland, he did not take time to think as a rational being.—The more intelligent mind of Dr. Cullen, also, seems, in this instance, to have been warped by his too great obsequiousness to the Edinburgh physician.

[We are indebted to our esteemed correspondent, who transmitted us the preceding case, for the following notices of the life of Cullen, and for another of that great man's letters,—concerning an asthmatic case. EDITOR.]

DR. CULLEN must have been settled in Hamilton, as a practitioner of medicine, at an early period, as it appears by the books of the town-council of that place, which we have examined, that he was admitted a counsellor in 1737, and it is proved by his own signature, that in 1738 he was junior, and in the two following years, chief-magistrate of the burgh; being in the twenty-fifth year of his age at the time of his first admission into the council. Most accounts of his life assign this office to his father; but it appears by a legal case in which he was examined as a witness, that he attended patients in that neighbourhood, as a physician or surgeon, in 1735; where he testifies of Mr. M., a brother practitioner, that he (Mr. M.) was generally considered as a man of little delicacy in morals.

In the books of the Town-Council he is styled, William Cullen, surgeon. We knew an old lady who recollected having seen Dr. Cullen in his shop, at Hamilton, with several appren

tices round him, among whom was Dr. William Hunter and a Dr. Douglas, afterwards a man of some eminence.

Dr. Cullen, after his removal to Glasgow, as may be naturally imagined, was frequently consulted in the neighbourhood of Hamilton, and thus he had occasion, soon after 1752, to meet sometimes with Dr. Cook, at that time just returned from Russia, aud patronized by John, Earl of Hyndford, commonly called the great Earl, formerly ambassador at the Court of Petersburgh.

Dr. Cullen, with all his genius, was but a man; and, like an Eastern despot, could bear no rival near his throne; and thus, perhaps, he often differed in opinion from Dr. Cook, a man of a fiery, irritable disposition, although otherwise of a most honourable character, and a very sagacious practitioner. Another cause of their differing in opinion might be, that Dr. Cook was a staunch Boerhaavian, and Dr. Cullen had begun to emancipate himself from the trammels of the medical schools; so that, in some respects, Dr. Cook considered him as a quack. But, with all this, the Doctors behaved civilly to each other, till the death of George James, Duke of Hamilton; after which, it is not known that they ever corresponded, or visited the same patients. Dr. Cook, on the first attack of that illness (tabes mesenterica) which terminated the Duke's life, was confined to bed with the gout; and when he was able to visit the patient, he differed toto cœlo from the other physicians as to the treatment, which had been starvation.

Dr. Cook, his antagonist, was an eminent man in his day; a patient observer of Nature, and an admirer of Hippocrates. He was an intimate friend of Dr. John Rutherford's, Professor of Medicine at Edinburgh, and of other eminent men in that rising school of medicine. He was a year younger than Cullen; and died nearly about the same time. That eccentric man, Dr. John Cook, of Leigh, in Essex, who may have been known to some of our readers, was his cousin. We were informed by the late Mr. Benjamin Bell, that Dr. Cook was said to have frequently cured fistula in ano by means of a paste and an injection. He was also successful in the cure of cancer, principally, we believe, by the external and internal use of hemlock.

The letters already inserted, and the one which we shall now give, were written at a comparatively early period of his career, by a man whose genius will be admired as long as mankind shall possess any medical records; and, though of little value in themselves, these letters will, we hope, be agreeable to our readers, as the production of such a man, and as shewing his opinions on medical subjects, at a time when he had published no practical writings.

To Dr. John Cook.

DEAR SIR,—From the accounts I have had formerly, and those I have now from you, I am disposed to consider Mr. Lockhart's disease as pretty purely asthmatic; that, as commonly, does now, in some measure, alternately attack his head and breast. I would wish to know, what I have not yet learned, how far he has any cough or expectoration, especially towards the going off of the breathless fits, and what difference appears in his pulse on the free days from what appeared on the breathless days. I am glad to find he is pretty free of fever; but from the plethoric state of his body, I thought proper to advise a bleeding in the Highlands; and as I understood his blood to be sizy, and that he was relieved in some measure by the evacuation, I wrote Mrs. Lockhart by last post, proposing a second bleeding, and which I think you may still try, unless he is either remarkably easier, or that you find some strongly contra-indicating symptoms. I should especially think it necessary before giving him any bark, which I doubt he is not yet ready for. The periods must be exactly ascertained; the intervals must be very clear; and, if possible, a good separation in his urine, before I would give the bark with any freedom. To obviate, as much as possible, any latent gout, I proposed the blisters on his ankles, and I expect a good effect from them, though it may not immediately appear. I think it cannot be amiss to try him with a little ammoniac and assafœtida, either in solution or in pills, with a moderate dose at first, to be increased according to the effects. I would not try to keep his blisters running, but let them heal, and depend more upon a fresh application. I am glad to find Mr. Lockhart agrees well enough with exercise; I would therefore employ it as far as it conveniently may. In such a case, one might think of squills, but I expect little from them; and to a person so averse to drugs, they might be troublesome. I wrote last post on the subject of Mr. Lockhart's diet, and Mrs. Lockhart now puts the question about milk. I think a little of any kind may be taken, and more or less, as Mr. Lockhart's constitution formerly, or a trial now, may determine, but in general I would have the butter-milk tried with great caution. This is all that occurs to me at present; but I shall expect to hear from you frequently.

Dear Doctor, yours, &c. &c.

WILLIAM CULLEN.

Edinburgh, 26th July, 1759.

Court of Appeals.

"Judex damnatur cum nocens absolvitur."

Chemistry.

Dr. Thomas Thomson
Versus Dr. A. Ure and Mr. Brande.*

We are rather sorry that this cause has come before us, in so far as open personality and the mutual bandying of censure and vituperation must not only tend to injure the fair fame of those who use them, but must operate much to the prejudice of science itself. We cannot too strongly reprobate this irritative and recriminating spirit in matters connected with science, which ought to be kept above the stormy warfare of rivalry and passionate feeling, and should only belong to the quiet contemplation of judgment and induction. But, perhaps, this is requiring too much of human nature, with all its follies and its passions, which often forcibly intrude upon the man of science, and rudely mar his finest speculations and his fairest fame. Envy is the deadliest fiend of the whole legion, and but too often attends upon the steps of philosophical ambition. We have heard that a certain scientific writer of distinction carries this reprehensible spirit so far, that he cannot bear to see the eminent baronet who is reputed, on the best grounds, to be the author of Waverley, because the unrivalled novels have brought more fame and more money to the author than all the careful experiments, ingenious theories, and laboured writings of the learned professor. This, it will be said, is exceedingly silly, but it is quite human—though we cannot say *manly*, for the word has long lost its literal signification.

While, however, we enter our strongest protest against the

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* A Journal of Science, Literature, and the Arts, edited at the Royal Institution of Great Britain; No. 21, page 119, where there is an analysis of Dr. Thomson's System of Chemistry, sixth edition.

Answer to the Review of the Sixth Edition of Dr. Thomson's System of Chemistry, in No. 21 of the Journal of Science, Literature, and the Arts, edited by Mr. Brande. By the Author of that System. Reprinted from the Annals of Philosophy for April 1822. 8vo. London, 1822.

ebullition of angry or envious feelings in scientific discussions, we would do every thing in our power to promote the freedom and independence of spirited remark and argumentative criticism. This has been productive of the greatest benefit to literature, in banishing sentimental prettyism and mere sentence-making—writing, in fact, for the sake of writing, without having any thing to write about—while the want of it in science has been of late severely felt. The law of etiquette, indeed, with respect to scientific men seems at present to be, that they are scarcely amenable to criticism, and that every thing in the form of a scientific or experimental paper should be received with gratitude and lauded as meritorious. Nothing could be more calculated than this to retard the accurate establishment of facts; it is even, we conceive, worse in its consequences than the open warfare to which we must now attend.

The parties in this controversy are well known:—Dr. Thomas Thomson, the author of the most copious work on chemistry in the English language, who now fills the chemical chair in the University of Glasgow, distinguished for having been successively filled by Cullen, Black, Irving, Hope, and Cleghorn;—Dr. Andrew Ure, the author of many able papers in the scientific journals and transactions—of the Chemical Dictionary, on the basis of Nicholson's—and Professor of Chemistry and Natural Philosophy in the Andersonian Institution of Glasgow, the parent of all the institutions for teaching philosophy in a popular manner;—and Mr. W. T. Brande, Secretary to the Royal Society, the author of many experimental papers, of a Manual of Chemistry, &c. and Professor of Chemistry in the Royal Institution, Albemarle-street.

The review of Dr. Thomson's Chemistry, which appeared in Mr. Brande's journal, is ascribed by "common report," as we are told by the author of the Answer, to "Dr. A. Ure," and "several circumstances," he adds, "induce me to give credit to that report." On this point we cannot speak with any certainty, but we should hope that the report is not true, for otherwise it would be far from favourable to the reputation of the alleged reviewer, who could thus attack under a mask the character of a rival teacher, who divides with him all the chemical pupils of the city of Glasgow. It is natural enough, that, in such a case, there should be some little striving, if not strife, for the superiority, where both the teachers are distinguished; but this striving ought to be all fair, open, and candid, and the one ought not to screen himself behind a mask, in order that he may make a safe pass at the other. We are far from saying that this has been done; we only made the reflection on the unproved report of common fame.

If the review was not written by Dr. Ure, as it may not, our remarks will not apply; for surely Mr. Brande cannot in the remotest view be considered in a state of rivalship with Dr. Thomson; and it is but candid to think that he inserted the paper, whoever the author may be, for the sake of promoting discussion and benefitting science. In giving a specimen of the charges and the replies, we think it the fairest method to let the authors speak for themselves, and leave our readers to decide on the evidence.

Reviewer's Charges.—"His Introduction is a poor specimen of composition."—"We proceed to—ponderable bodies, which are handled in a very heavy style."—"By the aid of many Italics, the Doctor tries in vain to give emphasis to his favourite mode of writing, which, from its extreme rarefaction of ideas, might be called the vacuous."—"The whole information contained in his four papers on the specific gravities of the gases and the true weights of the atoms, might have been easily conveyed in one-twentieth of the compass."—"We have animadverted on the style *passim*: it is feeble, discontinuous, and ungrammatical."

Dr. Thomson's Answer and Recrimination.—"The want of discernment evinced in these attacks upon my style, occasioned some surprise at first. I may be very often accused of great carelessness of style, but never, unless I deceive myself egregiously, either of want of energy or diffuseness. Indeed, the characteristic properties of my style are just the opposite of diffuseness. I am remarkably concise, though, I hope, always clear, and generally energetic. Nothing, indeed, can constitute a greater contrast than my mode of writing and that of Mr. Brande. If he be a good writer on scientific subjects, it follows as a necessary consequence that I am a bad one. I refer the reader to his History of Chemistry in the Supplement to the Encyclopædia Britannica, to his article Chemistry in the same book, and to some of his prefaces in the Royal Institution Journal. In point of diffuseness, want of energy, and bad taste, these dissertations constitute a perfect contrast to every thing which ever flowed from my pen. Indeed, were I disposed to criticise style, nothing would be easier than to retaliate upon Mr. Brande." *

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* We have heard a very characteristic anecdote of the style of one of the parties in the controversy. The chemist was one night travelling in a carriage with his niece, a lively girl in her teens, who, after making several unsuccessful attempts to engage her laconic uncle in conversation, perceived that he was looking very philosophically towards the heavens, and thought she might suit his humour by exclaiming, "What a beautiful star, uncle!"—"Did you ever see an ugly one?" was the surly reply.

Reviewer's Charges.—"We are at a loss to conceive why a new edition has come forth."—"In every thing regarding the philosophy of chemistry, or the developement of general principles, it is ten years behind."—"Dr. Thomson's ten pages on electricity are also reprinted without alteration, though he surely might have taken the trouble, when he plunged so deeply into magnetism with Mr. Barlow, to have said something about the newly-discovered relations of that power and the electric."—"His tautologies are endless, and his self-contradictions intolerable."

Dr. Thomson's Answer.—"The new edition, I presume, was printed because the old had been sold. I am not aware that booksellers proceed in any other way." "I was obliged by my agreement to correct the press, and nothing more." "Why it is necessary that the new edition should be decidedly superior to the old I do not perceive. Nor could any blame have been attached to me, though it had been printed verbatim from the fifth edition. But it is in reality decidedly superior; because it contains all the additions which had been made to the science in the interval between the two editions, so far as they were known to me." "What is the discovery which I have omitted to notice?" "The assertion of the reviewers that it is ten years behind the present state of the science, is remarkable only for its shameful falsehood. Not a single proof is advanced in support of it, except that I took no notice of the newly-discovered connexion between electricity and magnetism. Now I was the first individual in Great Britain who made known Professor Oersted's discovery. It appeared in the Annals of Philosophy for October, 1820. Before I became acquainted with this discovery, the whole of the sixth edition of my System was printed. Indeed, as the book was published in October, or soon after, Mr. Brande must have been aware of the absurdity of the accusation; and he must have been induced to bring it forward because he had no real omission to point out." "The assertion that the second volume is a repetition of the first, is so palpably untrue, that the Reviewer must have been aware of its inaccuracy when he made it." "Not a single page of repetition is to be found in the book."

Reviewers' Charges.—"He has no allusion whatever to the Natural History method of Mohs, which promises to do for the study of minerals what the sexual system did for plants;—enabling a person, on taking up a specimen, to refer it to its peculiar class, order, genus, and species, till he discovers its name and various relations."—"The only observable alteration,

indeed, in his present article on mineralogy, is the erasure of Professor Jameson's name wherever it formerly occurred."

Dr. Thomson's Answer.—"With respect to the system of Mohs, which has been adopted by Jameson in his last edition, I must confess myself an incompetent judge, because I do not understand it." "Mr. Jameson's last edition is a cypher without a key. Under these circumstances, I thought myself obliged to omit my references to Jameson's system. I could not refer to the new edition, because I did not understand it. Thus circumstanced, I thought the best thing I could do, was to refer to Hoffmann's Mineralogy"—"from which most of Jamesons descriptions are taken.

In this case, we decidedly think Dr. Thomson in the right. *We* also confess that we cannot comprehend much of the system of Mohs, and what we do understand appears altogether absurd. For instance, we find in his second order of minerals, *atmospheric air*, and *atmospheric water*, which are surely altogether out of place among minerals. What is more strange still, is, that while he makes *rain* to be a mineral, he takes no notice whatever of mineral waters! Lord Shaftesbury, in his advice to an author, very shrewdly remarks, that the surest and easiest way of becoming absurd is by rule and system; and we think Mohs, in this instance, strongly exemplifies the remark. Mr. Jameson, as an improvement on his master, introduces not mineral waters,—which, by the way, are most unaccountably omitted in all the systems,—but "*sea water*," which he gravely informs us, both in his Manual and in the Supplement to the Encyclopædia Britannica, "*is the water of the ocean*"! Mohs, like Haüy and Romé de Lisle, makes great use of the crystalline forms of minerals. His first care, indeed, is to discover whether a mineral be crystallized as a rhomboid,—a pyramid,—or a prism, and upon this he founds its name. Chalk, for instance, he calls rhombohedral-calc-haloïde; flint, he calls, rhombohedral quarz, [not quartz] and sparry iron ore, he calls, *brachy-typous-para-chrose-baryte!* Now to say nothing of the fact, that minerals are more commonly found without regular form than crystallized, the system must mislead a beginner into the notion, that minerals with such sounding names are something very different from those which he already knows; Prismatic Epsom salt, for example, would lead one to think that some peculiar variety of it was meant. Who, besides M. Mohs, could detect a rhomboidal crystal in a piece of chalk or of common lime-stone? It puts us in mind of another German system,—Von Feinagle's art of memory, with all its clumsy and lumbering parade of

foolish associations, which everybody who has learned, is anxious to unlearn. We pitch M. Mohs and his system into the oblivion which they certainly merit.

Reviewer's Charges.—"Dr. Thomson's attacks on the exalted reputation of the President of the Royal Society have long excited our surprise and indignation."—"But the full force of Dr. Thomson's hostility was exerted in depreciating the miner's safety-lamp."—"The pages of Thomson's Annals became for some time thereafter the receptacle of much criticism and invective against the safety-lamp and its inventor."—"Of M. Gay-Lussac he says, 'We may pity the pusillanimity;' and he arraigns M. Thenard with downright dishonesty."

Dr. Thomson's Reply.—"This impudent assertion the assertor knew to be false when he made it, and betrayed his knowledge of it in the very review in which it is contained. It is false that I have ever made any attack on the character or reputation of Sir H. Davy. On the contrary, I have always been in the habit of reckoning him among the number of my friends."—"I deny that I ever depreciated the safety-lamp. I did, indeed, when I heard Davy's account of his first lamp read to the Royal Society, express my opinion in my Journal, that it could not be used with safety."—"As I honestly believed at the time that the lamp was hazardous, I think that I was bound to state my reasons for this opinion to the public."—"Almost immediately afterwards, Davy himself rejected his first lamp."—"Against his new lamp, I never in the Annals of Philosophy stated a single objection of my own, nor, so far as I can recollect, of any other person."—"My conduct with regard to the controversy" "respecting the person who had the merit of first introducing the miner's safety-lamp" "was fair and honourable," as "appears from this, that all the controversialists accused me of partiality to their adversaries."—"I must now draw the reader's attention to another particular, because it shows that this malignant writer was conscious of the inaccuracy and falsehood of his statements, and that he drew them up with no other view than to make up the appearance of a case, by jumbling together the most monstrous and inconsistent falsehoods."—"Had the reviewer quoted the passage" respecting Gay-Lussac "fairly," "it would have appeared, (contrary to his assertions,) that, so far from having attempted to deprive Davy of the honour of being the author of the modern theory respecting muriatic acid and chlorine, I have done him the most ample justice."

Reviewer's Charges.—"He drew up an analysis of a book (BARLOW's *Essay on Magnetism*) which he evidently did not un-

derstand, that he might have an opportunity of attacking the most illustrious scientific association in Europe, the Royal Society of London."

Dr. Thomson's Reply.—"As for my observations on the council of the Royal Society, I have only to say, that, when I made them, I thought them just, and I still continue of the same opinion. As a Fellow of the Society, I thought myself not merely entitled, but called upon, to notice any little inadvertance on the part of the council."

Reviewer's Charge.—"This hypothetical sentence is thrown at once on the student, without preface or commentary: 'The weight of an atom of oxygen in the subsequent part of this work will be denoted by, 1st, a volume of oxygen is equivalent to two atoms,' &c."

Dr. Thomson's Reply.—"The reviewer must have been sadly put to it, in his search into mistakes, when he was driven to the necessity of creating them by misquotation, that he might have an opportunity of animadverting upon absurdities which originated with himself."—"The passage in my System is really as follows: 'The weight of an atom of oxygen in the subsequent part of this work will be denoted by 1. A volume of oxygen is equivalent to two atoms,' &c."

Reviewer's Charges.—In the Annals of Philosophy, April 1816, Dr. Thomson makes the equivalent of the phosphoric acid 3.634. In the Annals for August 1816, he makes it 3.5. In January following we find him affirming it to be 4.5, and that 3.5 is undoubtedly wrong. In October 1817, he returns to 4.5, confirming it by multiplied facts and reasonings. Finally, after Sir H. Davy, in 1818, ascertained the number to be 3.50, Dr. Thomson resumes 3.5, and claims the priority, by referring to the Annals for 1816.—(See *Review*, page 147, and URE's *Dict.* ART. *Phosph. Acid.*)

Dr. Thomson's Reply.—"With respect to my mode of taking the specific gravity of phosphuretted hydrogen gas, the reviewer observes, 'This confession betrays poverty of invention and ignorance of the methods previously practised in such cases.' This observation from an individual, who, so far as is known to the public, never took the specific gravity of a gas in his life,* and directed against me, who have determined the specific gravity of more than twenty gases, *with a degree of care and accuracy sel-*

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* If this is aimed at Dr. Ure, it is not true, for we ourselves have repeatedly seen him, in his public class-room, take the specific gravity of gases, and teach his pupils the method of doing it.

dom equalled, and never surpassed, had surely been better spared. I affirm that my method is susceptible of greater accuracy than that which the reviewer insinuates that I did not know; and this I affirm, from having repeatedly tried both methods."

We do not find, however, that Dr. Thomson has answered the reviewer's charge relating to his repeated change of the equivalent number of phosphoric acid, though we think even for this he might have found a reply.

We must now leave the cause, of which we have impartially given the leading topics, to the judgment of our readers, repeating our regret that it should ever have come before the public in the garb of decided hostility. We observe that a fourth party—Dr. A. B. Granville—has come forward, and seems to lean to the side of Dr. Thomson, in consequence of some previous misunderstanding of his own with Mr. Brande; but with this affair we shall not intermeddle. We hope that our impartiality may be proved by each of the parties accusing us of partiality to the other.

British Review.

On the Symptoms and History of Diseases. By Dr. Marshall Hall.*

We consider Dr. Marshall Hall as a very clever and ingenious writer, though he is somewhat fastidious about his title-pages, and generally changes them in his second editions so completely, that the unwary may easily be led to purchase the same book twice. His Essay on the Mimoses is now changed to an Essay on the Disorders of the Digestive Organs; and his account of Mimosis inquieta (which Mr. John Burns and the Edinburgh journalists were old-fashioned enough to consider as puerperal fever) is now changed to a Serious Morbid Affection. His able work on Diagnosis, which was found, we believe, to be rather heavy in sale, is now curtailed of its extended nosology and its tabular views, and appears under its present dapper form, of a thin octavo, on the

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* An Essay on the Symptoms and History of Diseases, considered chiefly in their relation to Diagnosis. By Marshall Hall, M.D. F.R.S.E. &c. London, 1822. 8vo.

Symptoms and History of Diseases. We think this a great improvement, and consider it so useful, that we hasten to give our readers a sketch of it, till they can procure, as all practitioners ought, copies of the original. We are anxious, indeed, to bring under the consideration of the profession a part of the science of medicine so essential to an accurate study of the whole as diagnosis has uniformly been considered. Those who are engaged in practice must feel gratified in seeing the record of those circumstances (to a superficial observer, obscure or unimportant) which enable them to establish decided indications for the treatment of diseases; and to those who are commencing the study, it cannot be too earnestly recommended that they should early try to acquire those habits of observation and discrimination which characterize the intelligent physician, and without which all other acquirements are comparatively useless in effecting the ultimate object of our studies, the relief of disease.

The subject is almost new in English medical literature, the only work of the same kind which we are aware of being Berkenhout's Symptomatology, which is, for the most part, taken from Hippocrates. On the Continent, there are several works of a similar description, among which is the German work of Dreyssis, little known here, which has been well translated into French by M. Renauldin. It is more comprehensive, but not so accurate as Dr. M. Hall's. A living author also, M. Landré-Beauvais, has published a valuable work, entitled "Séméiotique, ou Traité des Signes des Maladies." Our author seems not to have made much use of these works, if, indeed, he be acquainted with them; for his book, though it manifests considerable medical learning, is far from being a compilation, as he has observed and thought for himself, and has given all his observations, even when not new, the air of originality and philosophical independence of thinking.

The sources of EVIDENCE for the identification of diseases are, the Symptoms, the History, and the Morbid Anatomy. We agree perfectly with the arguments adduced to shew the necessity of the combination of the history and symptoms of diseases with the study of morbid anatomy, and on the imperfection of the knowledge derived exclusively from either source. We think this circumstance has not been sufficiently attended to, and that an undue degree of importance has been attached to the study of morbid anatomy, to the neglect of what we may call pathological physiology, or the study of the derangements of function produced by disease. We by no means wish to under-rate morbid anatomy, but to prove, that, by itself, and unconnected with the observation of symptoms, it loses its utility, and may even be

the means of leading us into the most serious mistakes. More than this, the study of the symptoms and history of diseases supplies a deficiency in morbid anatomy, namely, such instances of morbid affection as consist in derangement of function and leave no trace under the scalpel of the anatomist. And it is one of the objects of the history of diseases to trace the transitions, in mixed cases, of deranged function into deranged structure, the extensions of diseases of structure from one organ or part to another, and the superinductions, from accident or natural consequence, of one disease upon another. Dr. Hall does not profess to have exhausted his subject; on the contrary, he allows that he has devoted his attention more peculiarly to some particular circumstances in the history and symptoms of diseases, which he considers have not been sufficiently attended to by others.

The state of the *countenance* and the *attitude* of the patient are, with propriety, placed first in the rank of symptoms; and Dr. Hall tells us he has entered very minutely into the description of these appearances, to which, from their having been less observed by others, he has devoted more particular attention. The countenance of the patient, although a source of information too much neglected by writers on medicine, is very peculiar and highly characteristic in many diseases, and affords to the physician of experience and observation an important means of diagnosis. The kind, the stage, the changes, the mitigation and the progress of many morbid affections, are accompanied and denoted by corresponding states of the countenance. The observations made above relative to the attention claimed by the different conditions of the countenance, are equally applicable to the subject of the attitude and motions of the body, in general, in different diseases; for although the attitude, in certain diseases, is so remarkable, as absolutely to have challenged observation, yet, in general, this point has been too little noticed, and its indications too little explored. Hippocrates and Celsus have particularly noticed the attitude of patients.

The individual circumstances referred to the COUNTENANCE, are the changes in the viticular surface, the cutaneous circulation, the cellular substance, the muscular system, some particular features, and the general expression. In the common acute fever there is a diffused vivid flushing of the countenance, frequently with considerable turgidity; the tunica albuginea is apt to be suffused, and there is great febrile heat. There are also general anxiety, tremor of the lips in speaking, and a rapid movement of the nostrils, from hurry in respiration. In acute symptomatic fever the countenance has a very different aspect. The heat, turgidity, and flushing, the suffusion of

the eyes, tremor of the lips, and hurried motion of the nostrils, are absent, the surface being frequently moist. There is also usually an appearance peculiar to the primary disease. In common slow fever, instead of tumidity and suffusion, there are shrinking, partial flushing of the cheeks only, emaciation, and frequently a pallid and sallow hue: the cheeks fall, and the bony parts appear prominent: the surface becomes warm, dry, and rough; the lips and tongue are dry and tremulous, and are not moved with the usual freedom in articulation: the teeth are frequently affected with sordes or mucus. In chronic symptomatic fever the appearances are peculiar. There is a characteristic expression of disease, which strikes even the common observer. The surface and complexion are cool and pale, or affected with transient or partial heat and flushing, usually without sallowness, frequently with slight lividity, sometimes with cool moisture: there are emaciation and shrinking; the cheeks falling in, the action of the muscles becoming apparent, and the skin forming into folds. These appearances are however, as might be expected, greatly modified by the nature and seat of the original disease. In the milder form of typhus fever the countenance is equally unattended by deep flushing and tumidity, or by shrinking; but it is highly characterized by an expression of languor, feebleness, anxiety, and indisposition, and by tremor observed in the lips, and on speaking; the eyes are frequently suffused; the cheeks slightly flushed; the surface affected with a moderate degree of warmth. In the severe forms of typhus fever, the countenance is marked by great debility and tremulousness of the muscles, with great shrinking; the bones are more prominent; the intervening spaces more sunk and depressed than natural; the surface is sometimes slightly flushed, sometimes cool and clammy. The eye-lids are frequently partly closed; the eyes suffused, dull, and covered with a film of mucus; the mouth is partly open; the teeth and lips covered with dark glutinous sordes: articulation is imperfect, and attended with great effort: there is tremor and inadequate action of the lips and tongue: there is often superadded, the appearance of delirium, or of coma; of congestion; of collapse or of sinking.

There are not perhaps any cases in which greater information may be derived from the countenance of the patient, than in those peculiar series of morbid affections which our author has so ably described in another place, under the "outré" name of Mimoses, and to which he fairly allows that the more usual appellation of dyspepsiæ is sufficiently applicable. There are few, however limited their opportunities, who must have

failed to observe the striking manner in which the most acute diseases may be "mimicked" by affections in themselves not immediately dangerous, but easily rendered so by the mistaken employment of remedies most likely to relieve their prototypes. Such are Dr. Hall's mimoses, and the endless varieties of hysteria.

The most severe or acute form of this affection is accompanied with some paleness and sallowness, and a dark hue about the eye; the cutaneous vessels exude a little oily perspiration; the prolabia are slightly pale and livid; the muscles of the face, and especially of the chin and lips, are affected with a degree of tremor, particularly on hurry or surprise, or on speaking. Another variety of this affection constitutes the well-known chlorosis. (See *Quart. Journ. For. Med.* iv. 324.) A more chronic form is attended by a state of sallowness, a yellowish or jaundiced hue, a squallid or sordid paleness of complexion, or a ring of darkness occupying the eye-lids, and extending a little, perhaps, towards the temples and cheeks, and sometimes encircling the mouth. This icterode appearance of the complexion might, in some instances, be mistaken for true jaundice, were it not, that in the latter case, the tunica albuginea has a yellow tinge, a symptom which is absent in the former.

Under the title of the ATTITUDE are included the postures and motions of the body, the state of muscular debility, power, contraction and motion, some particular actions, and the general manner of the patient. We shall select a few instances of the manner of treating the subject. In organic diseases of the heart, in the early stages, the effects of exertion, and afterwards the particular posture, are very characteristic: in incipient or dubious cases the diagnosis is assisted by observing the effects of muscular effort, especially such as involves much change of position and general motion: in a more advanced stage, the sufferings of the patient become more acute and permanent; a certain restlessness, anxiety, and dyspnœa, aggravated by muscular effort, take place and distinguish the case from simple hydrothorax, in which muscular motion induces far less inconvenience: in a more aggravated form the patient requires to be more raised, even to an erect posture, or one inclined forwards: at any period of the disease a sudden change of posture from the horizontal to the erect becomes necessary, from the agitation produced by a terrific dream, &c. It is scarcely necessary to allude to the contrast presented by the attitude assumed in inflammation in the abdomen with acute pain, and the restlessnes and violent motion attending on spasmodic pain of the stomach, or in colic.

In the *first*, the patient lies on the back, with the thighs raised, or on the side, with the chest and thighs gently leaning towards the abdomen. The manner of the patient is soft and cautious; every muscular effort is suppressed; the arm is often put out, and the knees raised or depressed, with the utmost caution; any cough is repressed; the voice is low, the expressions short, and the patient does not complain loudly, even in acute suffering. In the *second*, the patient writhes to and fro, and constantly changes his position; or he sits in bed, bending his body forcibly forwards on the thighs; he cries out during a paroxysm of pain, and speaks in a loud and irritated tone of voice.

This difference affords one of the most striking diagnostics between the two diseases, which becomes still more satisfactory when strengthened by the coincidence of the effects of pressure on the abdomen. Dr. Hall cautions us, with great propriety, to draw our conclusions on this last point, not so much from the patient's report of his own feelings, as from the visible and less fallible effects produced on the countenance. In colic, the pain is intermittent, and during its absence the patient assumes an easy posture; on the contrary, during the remission of pain in inflammation, the same cautious posture and manner are still observed as before. We know not of any cases in which the combination of all these circumstances has afforded us more satisfactory results than in the distinction (occasionally difficult) between puerperal peritonitis and uterine pains, recurring with short or scarcely perceptible intervals.

Retention of urine, as a symptom in acute diseases, is often denoted by a state of constant elevation of the knees, which is inexplicable until the cause is discovered.

The TONGUE forms one of the best criterions of the varieties of fever. In acute fever it is usually white, and loaded, but is seldom dry, though there is much thirst and impaired taste. In acute hectic, again, it is often natural, though sometimes whitish or furred, and frequently moist. In chronic hectic, aphthæ and soreness of the tongue, for the most part, supervene. In typhus, the tongue is sometimes white, loaded, dry, and trembles when protruded. In the severer forms, it becomes dry, parched, cracked, tender, and dark brown or black. It is then, from its soreness and tremor, protruded with great difficulty. In the cold stage of intermittent, the tongue is dry and clammy; in the hot stage, still drier; and in the sweating stage, natural, or whitish, and loaded. In scarlatina, numerous elongated, florid papillæ rise above the white covering of the tongue, which seldom occurs in rubeola. In variola, pustules sometimes appear on it. In acute dyspepsia, the tongue is, in general, loaded with

a soft mucous substance, which sometimes becomes very thick, peels off, and leaves the skin red, smooth, and tender; the substance of the tongue is often swollen, œdematous, and impressed by the contiguous teeth; the red papillæ are often seen rising above the mucous load; there are indentations, often formed into creases or folds, with deep and numerous furrows; sometimes it is less loaded and indented, and its edges are red and even. In chronic dyspepsia, the tongue is more usually furred than loaded, the fur being like coarse velvet, and dry; in some cases, the papillæ enlarge, in others the tongue is lobed, and in others smooth and glazed. In chlorosis, at the commencement, the tongue is pallid and tumid, with enlarged papillæ, loaded, indentatious, and sulci; it afterwards becomes cleaner, smoother, more pale, of a lilac hue, and semitransparent; the papillæ disappear, and a morbid smoothness succeeds.

The loaded and swollen tongue is usually ASSOCIATED with an oily and swarthy state of the surface and complexion; the pale, tumid, and clean tongue, as in chlorosis, is accompanied by a tendency to tumidity of the integuments and œdema of the ankles; the clean, papulated, lobulated, fissured, or morbidly smooth tongue, is united with a nearly natural state of the general surface. The morbid secretions of the tongue seem, from these facts, to be connected with a morbid secretion of the skin,—a connection which merits farther research. The appearances of the tongue also often mark the duration of a complaint, the mere load being recent while the swollen tongue indicates a longer disease. *A practitioner who attends to these can often surprise his patients by his accurate knowledge of their case.*

In common acute fever, the GENERAL SURFACE of the body is characterized by a tumid, smooth, soft, and dry state of the surface, with a sense of glowing heat, and a florid colour; sometimes there is perspiration. In acute hectic, the surface is nearly natural; but in chronic hectic there is a chilliness, with lividity, and profuse morning sweats; while in common slow fever the skin is dry, rough, harsh, and shrinking, with acrid heat, and sometimes the cuticle rises into miliary vesicles on the neck and breast, or it exfoliates. In typhus fever, the surface is various, and not very characteristic; the heat is nearly natural, or a little more, with dry parched skin, or clammy perspiration, and miliary or petechial eruptions. In the cold stage of intermittents, the skin shrinks, becomes pale, cold, rough, and anserine,—the temperature as low often as 74°; in the hot stage, the skin is hot and dry, the integuments tumid and injected, and the temperature sometimes 105°; in the last stage, these appearances cease, and give place to a general perspiration. In scarlatina, the inte-

guments are very tumid and injected, temperature as high as from 105° to 112°, the rash continuous, giving a deep red hue to the skin, which is hot, smooth, soft, and dry,—terminating at the decline in roughness and exfoliation. In scarlatina maligna, all these appearances are reversed, and there is even sometimes a shrinking, cold moisture, and a pale or livid rash. It is of the utmost importance to observe this, as the cold affusion, where the skin is not dry and hotter than natural, may prove instantly fatal. (CURRIE's *Med. Rep.* ii. 76.) In rubeola, the heat of the skin is from 99° to 102°, with little tumidity and injection, except of the face and eyelids. In dyspepsia, there is a tendency to diminished temperature, with great sensibility to cold, and perspiration excited by the slightest hurry or fatigue. In strumous disease of the mesentery, this sensibility to external cold is very great, the least draught of cold air driving the patient to hang over the fire, till the hands and legs assume a brown colour. In organic diseases of the glands of supply, such as the liver, the pancreas, the spleen, the mesenteric glands, the stomach, and the small intestines, there is considerable emaciation, and the gradual return of flesh, under a curative process, is often striking; on the contrary, in organic diseases of the glands of waste, such as the breasts, the kidneys, and the large intestines, the emaciation is less and less rapid—(See PEMBERTON *on the Abdominal Viscera*, ch. vi.)*

In symptomatic fever the HANDS and FEET have little of the tremor observed in idiopathic fever. In acute fever there is tremor and burning heat. In typhus the tremor is often so great as to amount to subsultus tendinum: when it occurs in a violent degree, it usually foreruns delirium, as in delirium tremens. In acute dyspepsia tremor is observable on extending the arm and hand;—the palm becomes cold and clammy, the nails become lilac, and their tips white and opaque. The feet and nose are also liable to become cold. In chlorosis, the hands, fingers, and nails become very pale and bloodless,—and in protracted cases the nails sink in irregularly in the middle,

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* It is a great loss to the profession, that Dr. Pemberton should have been so long and so hopelessly afflicted with Tic douloureux, which is so severe as to have made him relinquish a very lucrative and increasing practice. It is publicly, and, we believe, creditably reported, to the honour of Sir A. Cooper, that he lately sent Dr. Pemberton, in a present, a check for a thousand pounds; and it is added, that Dr. P. immediately remitted Sir Astley a bond for the amount, which bond Sir Astley most generously destroyed. Such actions are worthy of the leading men of the profession.

and break off in pieces from brittleness, so that the patient cannot take a pin out of her dress. In organic disease of the heart, the hands become cold and livid, and the finger ends expanded. (See *Farre, Malform. of the Heart.)*

The more sudden effects of INTESTINAL LOAD and IRRITATION, so frequently mistaken for inflammation, are either or all of the following:—acute pain of the head, of the side, of the loins, of the iliac region, or of some other part of the abdomen; attacks of vertigo, of dyspnœa, of palpitation, of vomiting, of hiccup, anxiety, and distress, clammy perspiration, or, on the contrary, febrile heat. In such cases, enemata and purgatives are to be tried; but bleeding will be most injurious. These effects usually occur after great exertion, agitation, pain, fatigue, hæmorrhage, undue blood-letting, or purging,—and in the course of diseases.

EXHAUSTION, from great evacuations, fatigue, or fasting, or from digitalis, produces severe rigour, long continued, succeeded by great heat, frequent pulse, and the head or the abdomen seriously affected. In slower attacks, less rigour, heat sometimes absent, throbbing pain in the head, vertigo in the erect posture, palpitation, hurried breathing, sighing, and irritability of the stomach and bowels, or constipation, and sense or fear of impending death. This, with the exception of the affections of the head, is very much like the Erethismus Mercurialis, so well described by Mr. Pearson, (*Lues Venerea*, ch. 12.) and so painfully experienced and amply detailed by the late Dr. Bateman, (*Med. Chir. Trans.* ix. 220, and M. HALL *on a serious Morb. Affect.*)

The state of SINKING is very different. It is attendant on gangrene and on death, giving the fallacious appearance of a cessation of disease. (ABERCROMBIE, *Edin. Journ.* xvi. 22.) Sometimes it is accompanied with jactitation, hiccup, and catching respiration; or with gasping, throwing off the bedclothes, sighing, feeling of the approach of death. Mr. John Hunter describes it well under the term dissolution, (*On Inflamm.* ii. 9. 3.) and Sir H. Halford has applied it to prognosis. (*Trans. Coll. Phys.* vi. 15.) These subjects our author justly thinks, are of "stupendous importance."

The morbid states of the functions of the BRAIN are necessary to be strictly attended to, such as the state of its energies in general, the sleep, the mental faculties and temper, the senses and sensations, and the motions,—voluntary, functional, and of the sphincter muscles. It is very singular that the energies of the brain should become very similarly affected, varied only in form and degree, in the two opposite states of fulness and depletion;

and the remark applies equally to the function of respiration, as affected by these opposite states of the brain, for example, in exhaustion and in plethoric apoplexy.

In the affections of RESPIRATION we must attend to the kinds of dispnœa, of cough, of expectoration, of the effects of a full inspiration and expiration, and of the affections of the voice and articulation. By attending to these alone, for instance, to the difference of sound and continuance in cough, we may often determine the character of a disease. Dr. Hall very justly depends more upon the effects of a strong *expiration* than of a full *inspiration* in detecting inflammation of the bronchia or of the lungs, or in asthma. Why is this so much neglected by practitioners?

It is not unusual to observe, that, in various diseases, the frequency of the PULSE remains, when the morbid actions have apparently subsided. In such case, it is necessary to continue our attention, and watch and wait for the diminution of the frequency of the pulse; and if this event do not take place in a moderate space of time, to ascertain whether the disease be in fact subdued, or only mitigated, and pursuing its course in an insidious form. This vigilance is particularly necessary in cases of pleuritis and peritonitis.—Connected with this subject, Dr. Hall promises us, at an early period, an essay on the effects of the loss of blood, and on the use of the lancet. The subject is important, and the annals of the profession abound with valuable materials.

Under the head of the HISTORY of DISEASES we have a few rules for dispensary practice, which are satisfactory as far as they go, but by no means likely to supply the place of a system of clinical instructions,—a desideratum in English medicine.

We have said enough, and abstracted enough, to shew our estimation of the tenor of the work. It does not want its faults. A main one is the absence of reference to the labours of others. The style is, perhaps, too aphoristic, and though it is in general correct and classical, we observe, more than once, the vulgarism of *named* for *mentioned*,—"I have *named* the tendency," (p. 246.) But we are at all times more willing to praise the good than to bring forward the inferior parts of the subjects submitted to our decision; and we cannot too highly praise Dr. Hall.

Mr. Barlow on Midwifery.*

When such a man as Mr. Barlow vouchsafes, after a long life of experience, to present his opinions to the public, we are bound to receive them with respect and gratitude. After we had seen this work announced, we were impatient until we obtained a perusal of it, and from that perusal we are happy to find it will by no means diminish the justly acquired reputation of its author. We wish it to be understood that we are speaking of it in a professional point of view only: as a literary production, it is very faulty, abounding with grammatical errors, and marks of carelessness, at which we are surprised—such as "pelvises" for "pelvis," "column" for "collum," "spasm continue," and the like.

The surgical essays are placed first in the volume; they relate principally to the diseases of the urinary organs, and the operation of lithotomy. As it is our professed object merely to furnish our readers with a condensed view of what we consider most useful in the works which we analyse, we shall make no remarks on this first portion, as we meet with little to demand our notice, after our ample details of these subjects (*Quart. Journ.* iii. 38, 284, 292,) but shall at once proceed to the examination of those essays in which the author offers the results of his experience in the practice of midwifery.

In the first essay, after combating Dr. Osborne's ideas on the subject of laborious parturition, Mr. Barlow goes on to speak of the preternatural retention of the placenta, and the difficulties connected with it, under the following heads:—

Atony of the uterus, attended with flooding, may be excited by many causes, amongst which are, improper dilatation of the os uteri and vagina—artificial rupture of the membranes—a close warm room during labour—imprudent attempts at extracting the head of the child—or rash efforts to drag the body into the world in the absence of uterine action. All these are to be cautiously avoided. With regard to the time when it is desirable that the placenta should be expelled, Mr. Barlow thinks it should follow the delivery of the child either from one to two hours, according to the circumstances of the case. This practice he prefers to leaving it altogether to the efforts of Nature, on the one hand, or to its immediate extraction

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* Essays on Surgery and Midwifery; with practical Observations, and select Cases. By James Barlow, Surgeon. With Plates. pp. 417. 8vo. London, 1822.

on the other. He mentions a cause of internal hæmorrhage, which is worthy of attention. Sometimes the naval-string is implanted near the edge of the placenta, and a partial separation from the uterus is the consequence, during which a portion of it may get wedged into the axis of the pelvis, or cervix uteri, so as to block up the passage, and an hæmorrhage take place into the uterine cavity, and produce fainting and distension of the abdomen. In such a case, it would be proper to proceed to immediate extraction. The author seems to think favourably of the project of transfusion in those cases where death appears inevitable, from great loss of blood, and we think in all such extreme cases it is right to try every thing which may give the chance of life, though our hopes of success from this would be very slender.

Irregular and SPASMODIC action of the uterus and ENCYSTED PLACENTA require the careful attention of the practitioner. Simple spasmodic actions of the uterus only partially affect the cervix uteri. Irregular contractions of the cervix occur most frequently during or after abortion, about the middle of pregnancy, and are sometimes attended with flooding. When they happen soon after the birth of the fœtus, they oppose the spontaneous evolution of the placenta; but at this early period we may with security rely on the powers of Nature, provided neither flooding nor convulsions are present.

In the compound spasmodic uterine action, commonly called the hour-glass contraction, on applying the hand on the hypogastric region, the uterus will appear to the touch as if encircled with a tight ligature, leaving a transverse sulcated impression on the part. In this most dangerous form, if the woman is not affected with syncope, we may give a strong opiate to relax the spasm, and then cautiously pass the hand up to the fundus uteri, and separate the placenta from above downwards; but we must not use any undue or abrupt efforts, even in the most adverse cases.

Morbid and PRETERNATURAL ADHESIONS of the PLACENTA to the Uterus, are, fortunately, rare occurrences. In more than one instance where a morbid adhesion has taken place, the cause has been traced to an injury inflicted on the uterine region during pregnancy. All our attempts at seporation should be conducted with the utmost caution and deliberation. The mode of performing this we need not describe. Respecting those cases where the two surfaces are so firmly united as to render their division impracticable, the author makes some very valuable remarks, which we recommend our readers to peruse: we could not give them here without literally transcribing the

pages. At the conclusion of this section, moles, hydatids, polypi, &c. come under consideration. Our readers will find in our review of Clarke, some useful remarks on some of these.

In those cases where irritation of the uterus has come on after manual operations, the use of the class of medicines called emmenagogues is condemned, and they are accused of producing febrile action of the system. (See *Quart. Journ. For. Med.* iv. 119.)

The INDUCTION OF PREMATURE LABOUR is the next subject treated of.* This measure is reverted to in those instances where a woman could not otherwise bear a living child. Before, however, we determine on employing it, we should be convinced of this impossibility by at least two previous labours. Whenever an accoucheur meets with a protracted labour, from deformity of the pelvis, it is his duty to ascertain by touch its exact dimensions, lest, at a future period, circumstances may arise demanding the induction of premature labour. It is therefore requisite for him to know the measurement of his own hand in different positions. On abstinence and depletion of the system, as a means of retarding the growth of the fœtus in utero, Mr. B. has little reliance; and we think he is right.

Whenever the space between the symphysis pubis and sacrum is equal to three inches, we need not despair of extracting a living mature child, either with the forceps or lever; but when the space is not more than two inches and a half, the results of our author's experience lead him to believe that no full-grown fœtus can pass through such an aperture without certain destruction to the child, and consequent risk to the mother. It is then, in the intermediate degree of distortion that premature delivery is likely to be attended with advantage. The end of the seventh month of pregnancy is the most proper period for its performance, as at this time the child will be old enough to live, and small enough to pass through the contracted aperture. It may be sometimes usefully employed in cases of violent flooding, where the life of the mother is endangered. A synoptical table, which we cannot abridge, of the different degrees of distortion is appended to this essay.—To the once favourite but now abandoned Sigaultian operation, Mr. B. is decidedly hostile, as it affords little hope of preserving the life of the child, and subjects the mother to imminent danger.

We now come to three cases of CÆSAREAN OPERATION.

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* A valuable Paper on this subject, written by Dr. Merriman, will be found in the 3d vol. of The Medico-Chirurgical Transactions.

With the first of these our readers must be already well acquainted, as it was published more than twenty years since in the Medical Records and Researches, and as it has also been the subject of much controversy.* The two others, an abstract of one of which we gave in our last Number, were both fatal to the mothers, but the children were saved. Our author appears to have a strong bias in favour of this most dreadful operation. The ill success that has attended it in this island he attributes to constitutional disease.

In presentations of the superior extremities, Ambrose Paré was the first who taught the method of DELIVERY BY the art of TURNING: previous to this, the modes of treatment in use amongst practitioners were as barbarous as the times in which they lived; his plan, however, was not generally adopted till Mauriceau gave positive rules and injunctions on this head. The difficulty of turning is proportionate to the action of the uterus; to the degree of dilatation of its orifice; and to the length of time which may have elapsed after the evacuation of the liquor amnii. This operation should never be attempted whilst the os uteri is rigid and contracted; neither, in such a case, should the membranes, on any account, be ruptured; Venæsection and opiate clysters must be resorted to, and they will generally succeed in controlling the action of the uterus. When it is the right shoulder which presents, the right hand of the operator is most proper to be introduced, the woman being laid on her right side, and *vice versa*. On the spontaneous evolution of the fœtus Mr. B. says but little. Sometimes one or both of the upper extremities present with the head; in such cases, our author states his conviction that, in a well-formed pelvis, the powers of Nature are generally sufficient to enable the uterus safely to expel its contents without manual interference. Should circumstances demand our aid, we may reduce the labour to a natural one by raising up the arm during the absence of pain, and retaining it till uterine action comes on, when the head will be forced down, and the arm be prevented from again descending. The presence of one or both arms does not preclude the possibility of using the forceps or lever, should they become requisite. The powers of

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* For further particulars on this subject, we beg to refer to the excellent account of the Cæsarean operation in Mr. Cooper's Surgical Dictionary, 4th edition, and to Dr. Hall's publication;—the perusal of these will prevent the necessity of our discussing the point.

Nature were exemplified in three cases which Mr. B. attended, where both of the upper extremities presented with the head, and yet in each instance the delivery was concluded without injury either to mother or child.

We fear we shall be accused of having given a very confused account of this work; but its total want of method and arrangement has completely baffled all our attempts at analysis. Under these circumstances, all we could do was to read it through carefully, and note down the most useful remarks as we proceeded. Whenever a new edition is called for, we hope Mr. Barlow will not only re-model the book, but likewise purge it of those numerous inaccuracies which at present (like tares among wheat) are so thickly interspersed amidst his really valuable observations.

On the Effects of Artificial Eruptions in the Cure of Diseases, by Dr. Edward Jenner.*

The three extensive surfaces of the lungs, the alimentary canal, and the skin, are so closely connected together by their mutual influence, that when one of them is disordered, the others almost uniformly feel the effects; and the health of the general system comes thence, on account of the extent and importance of these, to be similarly affected. When the perspiration of the skin, for example, is stopped or diminished by cold, the superabundant fluid is thrown upon the lungs or the bowels, and produces, according to circumstances, inflammation, diarrhœa, or other diseases. Such, at least, was the doctrine of the humoral pathology. But besides this, there is another connection of these surfaces which is much less understood, arising from irritation; as, for example, when the stomach or bowels become morbidly affected, from incautiously repelling gout from the foot, or even a few pimples from the face; or when internal diseases are modified or cured by rubefaciants and blisters.

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* A Letter to Charles Henry Parry, M.D., &c, on the Influence of Artificial Eruptions, in certain Diseases incidental to the Human Body, with an Inquiry respecting the probable advantages to be derived from further Experiments. By Edward Jenner, Esq. M.D., LL.D., F.R.S., &c. Pp. 67. 4to. London, 1822.

Dr. Jenner has, in the letter before us, called our attention to another class of these counter-irritants, as they have been hypothetically called. His opinion is, that by the ointment of tartrite of antimony, we can do much more than by a blister, which only creates a vesicle; for we have at our command an application which will at the same time both vesicate and produce diseased action of the skin itself, by deeply deranging its structure beneath the surface, which a blister cannot do; and this is probably one cause why the sympathetic affection from cantharides and that from tartar emetic are very different. This is well illustrated by natural diseases of the skin. Some, for example, of the most unsightly, obstinate, and widely-spreading cutaneous eruptions, which merely take away the cuticle, expose the raw surface of the cutis, and excite a new diseased action on the abraded surface, produce little or no constitutional irritation; nay, merely simple itching. The reason is, that they do not penetrate into the cutis; and hence the comparative mildness, or entire absence, of secondary fever in variolid affections and in chicken-pox; and its frequent severity in small-pox, when the skin and its connection with the cellular membrane beneath it, are partially destroyed. The constitutional effects are very different, indeed, when the variolous virus is inserted beneath the cuticle than when it is inserted into the substance of the cutis. (JENNER *on Variolæ Vaccinæ*, 50-53.)

These views, though not altogether new, we hold to be sound and judicious, and to be capable of being much extended by observation and experiment. The mutual affections, indeed, of the skin and other parts of the body, particularly the lungs and alimentary canal, comprehend one of the most extensive branches of medical research, though we still want a more numerous collection of facts, and, still more, a sound, practical generalization of the facts already known. This contribution of the venerable discoverer of Vaccination, is therefore of high value as a step towards a more enlarged system of useful principles, founded on similar views. Still there is an air of miracle about the book, much calculated to excite distrust of its recommendations; and had it come from one less known, would have greatly injured its authority. We allude to the confidence with which Dr. Jenner recommends the ointment; and to nearly all the cases introduced being triumphantly successful,—picked cases, in a word, out of many, which, in the nature of things, must have misgiven, even with Dr. Jenner. We are far from making these remarks in order to depreciate in the least degree, the merit of the proposed practice, which, though not new, is not, we believe, very much followed;—we make them in order to put

our younger readers on their guard not to expect miracles from this nor from any other medicine.

We have ourselves seen several CASES in which the tartar emetic ointment not only failed to cure diseases in which it was exhibited, but in which it was even injurious. One of these cases particularly struck us. It was given to a labouring man, who had had an anomalous swelling and enlargement of the right knee-joint of some standing, and which had not yielded in the least to blisters and constitutional treatment. The ointment, of the strength of one dram to the ounce, was directed to be rubbed over the parts affected till pustules were produced; and in a few days a considerable number of pustules of the usual character appeared. In a short time, however, several of these put on a very singular appearance. They were inflamed at their base, which rapidly enlarged, and protruded above the surface a hard, cartilaginous, warty substance, composed of successive coats, like those of an onion, and exceedingly painful. The ointment was discontinued, and the tumours treated in the usual way; but they long resisted every measure. We do not know the termination of the case; but it should teach us, we think, to be cautious, and not over credulous in employing so active a remedy, which will often disappoint, and may prove injurious. We shall now give an abstract of Dr. Jenner's cases.

In a CASE of MANIA in a man aged sixty, who had formerly been a seaman, and had been subject to sick head-aches,—the usual treatment of depletion by venæsection and purgatives did no good. He was ordered, night and morning, to rub in, on the inside of the fore-arm, a drachm of tartar emetic, mixed with an ounce of simple cerate. Pustules were soon produced, and the cure was rapid, and continued permanent. In another CASE of mania, C. ———, Esq., aged seventy-five, had lived freely, and was formerly subject to carbuncles between the scapulæ. After an attack of cholera morbus, his intellects became much confused, and the mania increased, in spite of active treatment. The ointment rubbed in on the parts between the scapulæ,—avoiding the cicatrice of the carbuncle—cured him rapidly. In a third CASE of mania, in a young woman, Mr. Fewster's patient, whose ravings were violent,—leeches were applied to the head, and the ointment over the leech bites. As soon as the pustules appeared, she was well; and a relapse was cured by the same means. In a fourth CASE of mania, a woman, aged twenty, was, for two years, subject to great dejection of mind, with subsequent exhilarations. In November, 1820, she became insane, and Mr. Fry applied the ointment to the inner surface of the fore-arm. She rapidly recovered; and

her relapses were cured by the same treatment; but her parents not trusting to it as a permanent remedy, gave it up, and were trying to get her into St. Luke's.

Another CASE of Mr. Fry's was Mrs. B., aged twenty-three, who was seized with PUERPERAL MANIA the second day after parturition, and became totally unmanageable. The ointment was rubbed upon the fore-arm, but it was a fortnight before the pustules formed, when she was evidently relieved. It was continued with success for three weeks, along with purgatives and nauseating doses of tartar emetic. It is singular, that ten days after the primary eruption on her arms, similar pustules appeared on her back. The torpor of the skin, as in this case, is not unusual. Dr. Jenner once put setons into the temples of a lady who had hysteria and mental aberration, and for ten days no inflammation or suppuration ensued. We have seen several instances of the same kind in which blisters could not be produced by the strongest vesicatories.

In a CASE of HYPOCHONDRIASIS, with occasional temporary aberrations of mind, of short duration, in a young man in trade, the countenance was pallid, bowels irregular and flatulent, with heart-burn and quick pulse. He was ordered the blue pill with aloes, and twice a-day magnesia cum creta, along with the tartar emetic ointment rubbed on the pit of the stomach. Pustules appeared on the palms of the hands and on the scrotum: the ung. zinci was applied to the latter.

Two female CASES of HYPOCHONDRIASIS, with slight aberrations of mind and despondency, were greatly relieved by the ointment rubbed on the arm. Another, of a girl aged fifteen, who had CHOREA, with convulsions and partial hemiplegia, was quite cured by the ointment rubbed along the cervical vertebræ, with jalap and calomel internally. In a female CASE of spasmodic ASTHMA, the ointment applied to the nape of the neck produced great relief.

In a CASE of great pain in the right side of the head, chiefly about the orbit, so violent as to produce delirium and loss of sight, and which yielded not to bleeding and purgatives, was permanently cured in three days by the ointment. In this case the pustules appeared in twenty-four hours.

In a CASE of a boy aged 12, who had chronic HEPATITIS, the liver was enlarged, indurated, and sensible to the touch. The ointment, with mild opening medicines, produced a rapid recovery.

In a CASE of PYROSIS, with sore throat, cough, and hæmoptoë, Mary Smith, aged 21, was first treated with oxide of bismuth; but the most efficient treatment seems to have been the oint-

ment rubbed on the fore-arm. Dr. Jenner thinks this case proves that the ointment is powerful in affecting the mucous membrane. In another CASE of HÆMOPTOE, Mr. F., aged 37, was corpulent, and had been a hard drinker of ardent spirits. He had cough, and expectorated thick phlegm. Pulse quick. Bleeding, with pills of squill and ipecacuanha, were not successful; but he was greatly relieved by the ointment, which excited deep irritative pustules.

In a CASE of DYSPEPSIA, with jaundice and pyrosis, Dr. Jenner gave rhubarb with soap along with the ointment, and as soon as the pustules appeared copious, which happened in twenty-four hours, the patient got rapidly well; within six weeks he was completely recovered.

In a CASE of PULMONARY CONSUMPTION, a tall thin youth, aged 17, was quite hectic, emaciated, had anasarcous legs, expectorated copiously, and seemed, in a word, to be in the last stage of the disease. There was a perceptible protrusion of two or three of the ribs about the centre of the left side of the thorax. He was ordered digitalis and the compound powder of ipecacuanha. The ointment was rubbed over the swelling of the chest. In a fortnight he was much better, and in six weeks was quite well. In another CASE of PHTHISIS with hæmoptoë, of 25 years standing, the man aged 40, had a severe recurrence of hæmorrhage, which was arrested by superacetate of lead. The ointment was applied to the chest *on the opposite side to the one affected, as should always be done*, and he got greatly better; but whenever the pimples died away, he felt "plugged up in breathing;" and he has renewed the application with great benefit for twelve months.

Dr. Jenner quotes with approbation the paper of Dr. Robertson on hooping-cough, in which he found the ointment almost undeviatingly successful. We have more hopes of it, indeed, in this and in croup than in almost any other complaint, and cannot too strongly recommend an extensive trial of it.

We are very sceptical as to its effects in curing hydrophobia, though Dr. Jenner is, as usual, rather sanguine in this case.

We add the formula which Dr. Jenner has chiefly followed in the preceding cases.

℞ Antim. Tartarat. (subtil. pulv.) ʒij.
Ung. Cetacei ʒix.
Sacchari Alb. ʒj.
Hydr. Sulph. Rub. gr. v.
M. ft. Unguentum.

The sugar keeps the ointment from becoming rancid.

RICHARDSON AND DELLA CELLA ON THE PRESENT STATE OF MEDICINE IN THE LEVANT.*

EXCELLENCE and improvement can only be discovered and estimated by comparison. We should never have known the value of our present medical practice, did we not possess the records of former times, and did we not receive occasional sketches of what is occurring in countries less advanced and less enlightened than our own. We have in a former number given an account of an eastern medical curiosity, the first Turkish work on anatomy, and in the present volume (p. 30.) we have described, from original sources of information, the state of the medical schools of Russia, as organized by the celebrated J. P. Frank. The work of Dr. Richardson enables us at present to give a brief sketch of the actual practice in Egypt and Syria, so far as it came under his observation.

At Thebes, the city of the hundred gates, whose ruins are still celebrated, the prevailing diseases are affections of the eyes, and particularly cataract with dyspepsia, phthisis, scirrhous and ill-conditioned ulcers, cutaneous eruptions, and slight affections of the liver. But the physician is chiefly consulted in cases of sterility, which is thought to proceed from witchcraft or the curse of heaven, which he is supposed capable of removing; and he is threatened with the curse of his patients, if he refuse to prescribe for them.

At El Arisch, strong lusty men, of between seventy and eighty, came and thrust their arms into Dr. Richardson's hand for advice, and when he told them they had no complaint, they said they knew as much, but wished to know what disease would first attack them; and he could only get rid of them by telling them, that old age was the most to be dreaded, though he is of opinion *that old age is never the cause of death*, as he never knew a case of death which could not, as in the young, be traced to some other cause.

They make very grave objections to the physician seeing the face of a female patient. Dr. Richardson, on being consulted by the paymaster of Jaffa concerning one of his wives, and declaring

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* Travels along the Mediterranean and parts adjacent, in Company with the Earl of Belmore, &c. By Robert Richardson, M. D., &c. 2 vols. 8vo. London, 1822.

Narrative of an Expedition from Tripoli in Barbary to the Western Frontier of Egypt, by the Bey of Tripoli. By P. Della Cella, M. D. Physician Attendant on the Bey, pp. 238. 8vo. London, 1822.

it necessary to see the patient's face, was met with a terrified refusal. At last the husband wished to bargain with him to shew it in detail; the mouth and tongue at one time, the nose and cheeks at another,—the eyes being peremptorily excepted. The poor man was apparently apprehensive that Dr. Richardson really wanted to see his wife's beauty; and was not a little surprised when the doctor told him that he had no wish to see her at all, if he did not want her prescribed for. At last she was produced, and her symptoms, as well as those of many other females by whom he was consulted, discovered to him that nervous affections are very common among the cheerless tenants of the Haram. The fame of this scene of face-showing soon spread, and Dr. Richardson did not again require to go through it, though he found the wives even more reluctant than the husbands to comply; even ophthalmic patients frequently refused to show their eyes—till shook, and abused, and threatened by their husbands.

Omar Effendi, the Capo Verde of Jerusalem, had had an inflamation of the eyes of eight months standing, which was daily getting worse. Dr. Richardson advised scarification of the conjunctiva, which made his patient at first start with horror, but upon being assured it was the most powerful remedy which he could devise, the Capo Verde began to yield, but wished first to see it performed on another. A Christian was found with the disease, and Dr. Richardson made *three* free incisions of the conjunctiva; after which the poor man expressed himself much relieved. The Capo Verde then submitted to be operated upon, but under the express condition, that Dr. Richardson would make exactly *three* incisions as he had done in the case of the Christian, under the notion that there was a charm in the number three. The operation produced great relief, and Dr. Richardson was so much favoured on account of his successful practice, that he was indulged with a view of the interior of the Grand Mosque, the Haram Schereeff, which he says no Christian was ever before permitted to enter.

The fame of his practice at Jerusalem went before him to Damascus, where he was called in by Ahmet Bey, who had had his sense of hearing much impaired, and deafness advancing upon him so as to greatly depress his spirits. Along with M. Chaboizeau an able French surgeon settled at Damascus, Dr. Richardson cleared out from the noble patient's ears an immense quantity of hardened wax and cotton. The ringing in his ears immediately ceased, and so far from scarcely hearing at all, he seemed to hear too acutely, from the exposed state of the irritable organ.

The medical practitioner who travels in the East should provide himself with a set of Surgical instruments, particularly such as are necessary for operating on the eye, and for laying open fistulous sores. The most requisite medicines will be a plentiful supply of calomel, jalap, bark, ammonia, spirits of nitrous ether, and soda water powders. The nitrate of mercury, Dr. Richardson found very beneficial in eruptive diseases. A small quantity of any of these judiciously prescribed will be sufficient to secure the friendship of any great man in the country. Such other medicines as he may require will be found in the convents or shops of the country, with the exception of opium, which, strange to say, is seldom found good in those countries.

If a surgeon requires to operate, a regular bargain is made about the terms. If the patient be satisfied, the money is paid down, and the surgeon proceeds to perform the first part of his agreement by operating immediately. But this is seldom the case; and the patient usually goes away, but often comes back again to cheapen the terms. If no terms be made, the practitioner may receive a present perhaps, but is not likely to get any money. A regularly bred surgeon, practising in the Levant, told Dr. Richardson, that he had often been offered five paras (about a penny) for his advice by people in easy circumstances.

Dr. Della Cella gives a much more unfavourable account of the state of medicine on the southern shore of the Mediterranean. Having been consulted by the Bey of Tripoli's brother, for head-ache arising from plethora, he advised venæsection; but the prince having been accustomed to the ink and parchment treatment of amulets, was very averse to the measure. He consented, with the proviso of having the blood honourably interred in the doctor's own tent, which ceremony he himself attended with all solemnity. Dr. Della Cella cured his patient, but was alarmed for the consequences; for it was an encroachment on the province of the Marabouts, and as the steward was in their interest, he was afraid lest his allowance of food, scanty as it was, might be still farther diminished. These forebodings, however, were for the time dissipated by the entrance of an unusually great ration on which he instantly set himself to regale.

On coming to a certain place, a mortality broke out among the Camels which Dr. Della Cella traced to a poisonous plant of the umbelliferous kind, which he supposes to be the celebrated *Silphium* of the ancients, whence the country was called *Silfifera*. (CALIMACHUS *in Hymn.* HERODOTO iv. 169. and STRABO xvii.) The extract was a most lucrative branch of trade to the Cyreneans, as it sold for its weight in silver, and was kept in the public treasury and sold for the service of the state by order of Julius

Cæsar, when making preparations for war. (PLIN. *Hist. Nat.* xvii. 3.) It was represented from the time of Battus, on the reverse of the Cyrenean coins, which are now rare, with the Greek inscription KOTNON. A complete description of it is given by Theophrastus, (*Hist. Plant.* iv. & iv.) whence it appears that Sprengel is mistaken in supposing it to be the *ferula Tingitana.* The incursions of barbarians had so completely erradicated it, that in the time of Nero only one plant could be procured for him as a curiosity. Dr. Della Cella, however, is of opinion, that it has re-appeared in abundance, chiefly on the grounds that this was its natural soil, and that it would not, as we are told by the Ancients, bear transplanting.

ON THE MEDICAL GEOGRAPHY OF CEYLON.
BY MR. MARSHALL.*

THE comparison of the diseases of different climates, and the effects of different modes of treatment, often lead to the establishment of useful principles and of successful practice. In this point of view, the account of tropical diseases or of arctic diseases may often prove very instructive to the British practitioner. The numerous writings, indeed, of our colonial medical officers have introduced several novel and useful modes of treatment, which we might never have thought of but for their ingenuity, which has been called forth to meet the usually rapid course of tropical diseases. We cannot, however, go quite so far as to say with a respectable brother journalist, who has himself crossed the Equator, "that the writings of such physicians as have practised in tropical climates evince that enthusiasm in their profession, and those sound views of general philanthropy, which are *quite unequalled in the medical history of the age.* If, indeed, we recur to the history of our profession within the last fifty years, may it not be shewn that almost every method of practice which has attached to itself considerable notice, either from the zeal and abilities of its promulgators, or from its real efficacy in the removal

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* Notes on the Medical Topography of the Interior of Ceylon; and on the Health of the Troops employed in the Kandyan Provinces in 1815-20: with brief Remarks on the prevailing Diseases. By Henry Marshall, Surgeon to the Forces. Pp. 228. 8vo. London, 1821.

of disease, has been indebted for importance to its previous employment and success in the disorders incidental to warm countries?" The writer being thus sure of the fact, goes on to seek for the cause. "To what can this be owing?" he asks, "Is it because our ideas naturally expand, and our views of human nature become more liberal as we mix with the different races of mankind, and the inhabitants of various kingdoms? Or is it rather to be imputed to that spirit of enterprise which leads such individuals to study disease in its more exquisite and fatal forms, being generally associated with the better and nobler principles of our nature? These and many other causes may co-operate in producing the effect in question:"—"it is our duty, as impartial observers, of what is taking place around us, to record the fact." (*Med. Reposit.* April 1822.) Now, we think the fact should first be proved before it is recorded; and we are rather doubtful of the possibility of such proof: if it exist in the annals of the profession, it has hitherto escaped *our* research.

Mr. Marshall adopts the creed of those who trace diseases to an artificial mode of life, compared with what is natural, and tells us that the Kandyans, in consequence of simple diet, are completely exempted from the complicated diseases which prevail in certain states of civilization. We think that from his own shewing the fact is not so; for we find him talking in the very next page, of fevers prevailing to so great an extent, that "few of the inhabitants escape," not even children, who suffer in an extreme degree. In many of these cases, the countenance is bloated, the belly protuberant, and the lower extremities anasarcous. An atrophy also generally succeeds, which terminates in death. We could give numerous instances from the work which are equally hostile to this theoretical and improved notion of savage life being nearly exempt from disease,—a notion which could only have originated in the closet, but, being taught in the schools, it takes so firm hold of the young mind, as to prevent subsequent observation, as it clearly has done in the instance before us. One of the most gratuitous assertions on which we have heard it supported in the lecture-room is, that wild animals, in consequence of living in a state of nature, are exempted from disease—(See ABERNETHY's *Physiological Lectures.*) Now, how is this ascertained, for wild animals, when ill, will generally conceal themselves from observation? Mr. Marshall states a very strong fact in opposition to this doctrine. In 1806, 1807, 1815, 1816, a murrain of a very malignant kind prevailed among black cattle, at the same time a dreadfully fatal disease prevailed among the wild elephants, hogs, deer, and elks. In some places of the Batticulöe district, where wild hogs abound, the *bodies of several*

hundreds of these animals were found collected within a very limited space," (page 16.)

His observations on the nature of the climate, with regard to health and disease, are as minute and accurate as his opportunities allowed; but they are equally unsatisfactory in a practical view with all that have preceded him in the inquiry into the cause of epidemics and contagion. Poultry, he says, are occasionally liable to a disease, which carries off great numbers of them, though nothing is known respecting its nature. The animals which are seized generally die suddenly. Dissection has hitherto thrown no light upon the cause of the disease, and we are equally ignorant how far certain states of the air occasion the mortality, as it prevails as much during hot dry weather as when the air is moist and cool. The fact is no less worthy of remark, that imported animals are equally subject to fatal diseases with their European masters. Cows from England become sickly, and droop; horses are very liable to disease, particularly inflammation of the bowels; dogs, and particularly grey-hounds, soon droop and die, and their progeny is extremely difficult to rear. It is the same with African slaves and their progeny, none of whom reach the age of puberty, even with the greatest care.

There is little new or very interesting in his account of the remittent and intermittent FEVERS of the country, which prove rapidly fatal, often running their course in five days. As usual, dissection threw little or no light on the cause, there being found in those who died no morbid appearance sufficient to account for the death, for though sometimes derangement was observed in the brain, and the viscera of the thorax and abdomen, yet in other cases one or all of these organs appeared healthy and sound. In one brain he found about half a tea-spoonful of serous affusion in each ventricle! The spleen and liver were most frequently diseased. The state of the liver was most minutely examined by Mr. Marshall. Of fifty-five livers, the weight ranged from three to ten pounds, and about a half of these were quite healthy, and of the others the greater number were too soft; a few were indurated; some were pale, and others dark.

The TREATMENT of fever seems to be, in general, almost as hypothetical as the causes assigned for it. Our author followed the antiphlogistic method of venæsection, and cold affusion, with purgatives; but he seems, in some cases, to have carried this system too far, by debilitating the system beyond the power of renovation; for though, as he tells us, the early and repeated use of the lancet was commonly beneficial, yet could not a fatal issue of the disease be averted, since there are some *grades* [Qu. ?] of tropical fever almost [i. e. *altogether*] beyond the power

of medicine. Even in the acute species of tropical diseases, which require rapid and copious depletion, nothing can be more injudicious than reducing the patient to a state of irrecoverable weakness, or at least of persevering in depletion, when tonics and stimulants are clearly indicated, and are the only probable means of restoring him.

Mr. Marshall is not of opinion that the LIVER secretes more copiously in warm than in cold climates,—an opinion which we believe is in opposition to every observation which has hitherto been made. His own admission that INFLAMMATION of the LIVER is prevalent, goes far to prove that it is at least liable to be strongly excited; and that this excitement arises from the climate, appears from the circumstance that it is most prevalent among those who are newly arrived from Europe. He pursues a depletory TREATMENT along with mercury, provided there be no indication of the formation of pus; for in the case of an abscess in the liver, no quantity of mercury will produce ptyalism. Does this also neutralize the effects of acid baths? We think the circumstance well worth investigation and experiment, as it may lead to some useful result. Several cases mentioned by the author are very singular. In one CASE the pus contained in an abscess of the liver measured ten pints. In another, the patient recovered, after the abscess had passed through the diaphragm and the lungs.

The sort of PALSY called BERERERI begins with pain of the muscles of the lower extremities, sometimes burning heat, pricking pain, and a sense of formication. One limb is very seldom if ever affected. The appetite is not at first impaired. The gait is tottering, unsteady, and painful; there is, consequently, great unwillingness to move. The sleep is usually much disturbed. Eventually the appetite is lost, emaciation advances, the affected muscles feel dry and dead, and death ensues. It does not affect the natives. The causes of it seem to be inebriety and other excesses, with exposure to cold and damp. Severe cases rarely recovered, but stimulants, both external and internal, effected a cure in slighter affections.

In his account of DYSENTERY, Mr. Marshall gives the usual well-known train of symptoms. In Ceylon it was often found to be complicated with fevers and affections of the liver, though this was only casual, as our author thinks, and gives little support to the doctrine which attributes the disease to biliary derangement. We think, however, that Mr. Marshall seems inclined to carry this too far, attributing too little influence to the liver, and too much to the derangement of the coats of the intestines, which in many cases, if not in all, may be rather an effect

of the disease than its proximate cause; for when we find the intestines inflamed or gangrenous, we naturally inquire what was the cause of this. We find nothing peculiar in Mr. Marshall's TREATMENT, except his not giving mercury till it be probable that effusion of coagulable lymph has begun to produce a thickening of the intestines, whereas, by giving it sooner, he might probably have prevented this circumstance.

In three CASES of TETANUS from wounds, the author tried copious bleeding and large doses of opium in one, and enemata of tobacco in the others, without any good effect. In the post mortem inspections, there were no particular morbid appearances perceived, except a darker colour in the voluntary muscles: nothing to support the notion that tetanus is inflammatory.

The account given of EPIDEMIC CHOLERA coincides very much with that which is too well known in the profession to require us to be particular. He is decidedly of opinion that it is not infectious nor contagious. It was often fatal in two or three hours from the first attack,—a circumstance which would lead to the suspicion of some deleterious substance taken into the circulation. His TREATMENT was strong stimulants, to rouse the vital energies and recal heat to the system.

Dr. Park on the Pathology of Fever.*

Dr. Park is a clever, ingenious, and philosophic writer, and he would require to be all this in so hopeless a subject as the theory of fever, which has from the earliest records of the profession engaged the attention of most of its distinguished ornaments; but very unsuccessfully, as it would appear, for practitioners seem now to be as far from agreeing about the pathology of fever as they were centuries ago. New theories, indeed, we have in abundance, but none of them Newtonian—none of them eminent enough to drive their competitors from the field, and enforce the general consent. Of late it has been fashionable to refer fever to some local proximate cause. One very ingenious attempt of this kind has been made by Dr. Clutterbuck to refer

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* The Pathology of Fever: being the subject of the Gulstonian Lecture, lately delivered at the Royal College of Physicians. By J. R. Park, M. D. Fellow of the Royal College of Physicians. Pp. 161. 8vo. London, 1822.

it to a morbid change in the vascular system of the brain. Another, which Broussais claims,—but with what justice we shall not now inquire,—refers fever to inflammation of the internal coats of the intestinal canal, or, as Broussais calls the affection, *gastro-enterite*.

Dr. Park's views we shall now briefly sketch, and leave our readers to bring them to the test of their own observation and experience. He has made his inductions more from observation than experiment, which has of late been, perhaps, too exclusively pursued in physiological and pathological researches. Observation, indeed, is much superior to experiment, in so far as it does not produce artificial circumstances, but merely records, when accurately conducted, the operations and phenomena of nature. We do not, however, mean by this to depreciate experiment, it is often highly useful; but we think it wrong to trust to it exclusively, to the neglect of the endlessly varied experiments which Nature is continually carrying on under our eye. Dr. Park, however, while he avoids one extreme, is prudent enough not to run into the opposite, and in his Supplement examines the bearing which the able and ingenious experiments of Le Gallois, Dr. Wilson Philip, and Mr. Brodie has upon his pathology.

One of the leading principles of Dr. Park is, that there subsists a connexion of every function with, and an immediate dependance upon, the actual state of the circulation; and as every part has a different feeling and a different function, the same change of circulation will cause different effects in the various organs. That state of the vessels, for example, which occasions a sense of cold on the surface is attended by nausea of the stomach; that which causes external heat produces internal thirst; and that which produces great lassitude of the muscles produces confusion of ideas in the brain. Another of his general principles is, that the laws of motion appear to be nearly similar in all moving organs, all having certain limits affixed to their powers, and all, in consequence of this limitation, being subject to periodical change of action. Another is, that whatever increases the ordinary exertion of the vessels, or augments their contraction, increases equally their subsequent relaxation when the exciting cause is withdrawn. Thus, cold applied to the Schneiderian membrane contracts the vessels, and produces watery discharge, which is followed by a sense of the vessels relaxing and producing a sense of fullness and heat.

This is precisely the way in which Dr. Park describes the cold and the hot stage of fever. The COLD STAGE may be regarded simply as a state of over contraction in the capillary system; and the succeeding HOT STAGE, as the rebound of the same

vessels into a state of relaxation and distension. The SWEATING STAGE, again, is more properly a solution of the paroxysm, when the immediate cause ceases to operate. This CAUSE, Dr. Park thinks, is in all cases a spasmodic constriction of the pores or mouths of the exhalent vessels, which are precisely similar to sphincter muscles. The action of these orifices, like that of sphincters, appears to be vicarious with that of their vessels,—relaxing, when the vessel contracts, and, on the other hand, contracting when the vessels relax,—just as the sphincter of the bladder relaxes when it contracts to expel the urine, and contracts when the bladder, after micturition, relaxes. In the hot stage these orifices accordingly seem to be contracted while their vessels are distended, hence the transmission of perspiration; and in the cold state they seem to be relaxed while their vessels are contracted; and hence the cold sweat which usually breaks out, as it does also from collapse on the loss of blood, and on shrinking from fear.—This proof is all analogical and incapable of strict demonstration.

These states and changes are not, in fever, confined to any particular organ or part of the system, but are universal,—a position which our author shews some ingenuity in illustrating. For example, the state of the brain may be learned from that of the eyes, which derive their blood directly from it, and accordingly the eyes are found to be of a leaden dulness in the cold stage, whereas, in the hot stage, they become red and fiery.

Previous to describing symptomatic fever, Dr. Park gives an account of INFLAMMATION, which, according to him, is an ineffectual struggle of the vessels to throw off a load which oppresses them, for the pain subsides when the struggle ceases, though at the same time the distention or swelling may increase. The efforts are unavailing in the inflamed and weakened vessels, which remain distended; while in the healthy vessels, whose tone is unimpaired, contraction takes place, the blood is expelled, and the circulation diminished.

In slight local inflammation, these effects are local, but when the inflammation is extensive, they reach to all parts, and a general contraction of the healthy vessels of the whole system ensues, constituting the cold stage of SYMPTOMATIC FEVER. Dr. Cullen ascribed rigour in this case to atony or loss of tone, whereas it seems to arise rather from excess of tone. The hot stage, of course, follows from the law, that action is followed by relaxation. Fevers of this kind are most severe at the commencement, and assume the continued type from the permanence of the cause, the inflamed vessels keeping up the severity of the fever, till their power is exhausted; and when this occurs,

the inflammation becomes chronic, and the fever subsides. The evening exascerbation and acceleration of the pulse results from the law, that mobility of the organs increases for a time with exertion; the heart, for example, increases in mobility as the diurnal period of its activity draws to a close.

In INTERMITTENTS there is no evidence of inflammation, and he reverts for the cause to the laws of *irritation*, which, when it is internal to the organs, excites increased action, and when it is external, diminishes or suspends it. In whatever way, then, the cause is received into the system, before its specific effects manifest themselves, absorption must have taken place; and the impression will then act internally to the vessels, and excite a general contraction of the capillary vessels, and thus a rigor or cold fit will be produced. In ague, the severity of the fit is greater, because the cause acts directly, and not sympathetically. The internal irritation is illustrated by the action of emetics and purgatives, which, for the most part, owing their influence to the irritation they occasion, excite increased contraction of the stomach and intestines; and sudorifics, which by first irritating the internal parts, stimulate the exhalent vessels to contract, and their sphincters relaxing in consequence, perspiration ensues. When the vessels become much emptied, or when the irritating cause is partially removed, an intermission of the fit supervenes.

With regard to CONTINUED FEVER, the only cause which he conceives adequate to account for the phenomena of TYPHUS is one that is primarily and essentially *debilitating*, owing its influence, not to the power of irritating, and thus exciting inordinate action, but to its property of becoming a part of the body by assimilation. That typhus proceeds from debility, he infers from its following unwholesome diet, depressing passions, confined air, want of cleanliness, the abuse of intoxicating liquors, or any habitual excess which impairs the tone and vigour of the body. Genuine typhus, uncomplicated with local affection, may be comparatively rare; and when there is no inflammation, there is little or no cold fit, and never a strong rigor preceding the attack. This arises from the cause not being calculated to excite a rigor, and from the vessels not being in a state to effect one. The chilliness which sometimes precedes typhus, accompanied by languor and debility, is widely different from the strong rigors of ague, and denotes rather diminished impulse in the blood than increased resistance in the vessels. The cause of ague and of typhus differ in this, that the former irritates, because it will not assimilate with the body, while the latter, being derived from the body, is homogenous, easily assimilates with the

body, and does not irritate. Dr. Park proceeds to confirm his views by examining the effects of REMEDIES in the three genera of fevers arising from the three causes of *sympathy*, *irritation*, and *debility*.

In symptomatic fever, then, the INDICATION is to reduce the force of the circulation, by bleeding and other modes of depletion. Bleeding is, indeed, almost a certain specific. In typhus, though more uncertain, it may still prove beneficial at the commencement to relieve the vessels of their load. The frequent complication of this fever with local inflammation renders this still more proper. In the more advanced stage of typhus, this practice would be fatal. Then the debility must be restored by tonics and cordials. The effect of the affusion of cold water, he thinks, strongly proves his doctrine. It often effects an immediate cure, by constrictiug the capillaries, and consequently relaxing their sphincters, and promoting transpiration. Bleeding acts in a similar manner, as Dr. Currie observed—(*Med. Rep.*) The remedies for intermittents are all found to be externally counter-irritant, thereby preventing the contraction of the vessels from taking place. It is thus that bitters and tonics act upon the vessels of the stomach, and their dose ought, in consequence, always to be large. The effect of the tourniquet, however, when applied in ague to the arm and thigh of one side, Dr. Park thinks the most strongly illustrative of his views, as it stops the fit, by arresting the blood, and preventing undue contraction.

Encyclopaedia Medica.

REFLECTIONS ON THE TREATMENT OF FRACTURES OF THE LOWER EXTREMITY, AND A DESCRIPTION OF A NEW APPARATUS; WITH CASES. BY J. AMESBURY, *Member of the Royal College of Surgeons in London, &c. &c.*

DISEASES have at all times claimed attention in proportion as they intefere with the comforts of social life. The nature of many of these is known, and the principles of treatment well understood. There are others, however, concerning the treatment of which there yet remains much disparity of opinion, and this disparity alone is sufficient to shew that there is, in these diseases, room for much improvement. This is the case in the

treatment of fractures of the lower extremity, upon which I intend to make a few observations.

It is not my intention, on the present occasion, to enter into a full description of the nature and cure of fractures of the leg and thigh. I merely wish to throw out a few remarks on the mechanical treatment; which I have found advantageous in my own practice; and which may prove useful to others.

At present the treatment of these cases is extremely various. Some practitioners place the limb in the straight position, on the heel; others in the bend; others, again, slightly bent, upon the side. Some make use of splints only sufficiently long to surround the broken bone; others, of a length to reach from the pelvis to the foot. Some make use of a fracture box; others, of an inclined plane. Some place the patient on a feather-bed; others, on a mattress. The existence of so many plans of treatment, points out to us that all of them have their advantages as well as their attendant evils; for if any one method was far preferable to the others, that one only would be adopted.

In the treatment of fracture, it is ever to be remembered, that the bones are entirely passive; that when once placed right, they would of themselves ever remain so; that the muscles, pricked and torn by the sharp and ragged edges of the broken fragments, oppose the only resistance to reduction; and tend to disturb the coaptation when the bones have been once properly adjusted. In this they are assisted by accidental causes;—the patient's attempts to ease himself from an irksome position; his coughing, sneezing, &c., shake the body and upper part of the limb, and are often sufficient to displace the fragments; and thus indirectly irritate the muscles, and produce in them spasmodic or convulsive action, which is frequently followed by a host of ills which I need not mention.

Are not these indications to remove, as far as possible, all those causes which tend to displace the fractured bones; stretch and lacerate their already inflamed and tender fibres? Causes which might be removed and effectually prevented, by keeping the fractured parts in a natural position and quiescent state.

The muscles do not voluntarily contract upon a broken bone; but their tonic power or involuntary contraction is continually exerted and increased in proportion as they are irritated by mechanical or other stimuli. We do not see them attempt to raise a broken thigh; but we see their involuntary contraction, slight when the limb is smooth and even, and augmented in proportion as they are irritated, pricked, and torn by the serrated ends of the broken bone.

The soft and yielding texture of the muscles is calculated to

oppose but little mechanical resistance to lateral displacement; hence, in oblique and comminuted fractures, lateral displacement is easily effected; and as soon as the fragments are thrown out of their natural position, the muscles contract more forcibly, and increase the displacement. They cause the bones to ride, and to penetrate their bellies; and then, as if mad at the very evil they had produced, they act with ten-fold vigor, and occasion, not unfrequently, permanent shortening of the limb, or inflammation and abscess, and sometimes death.

Seeing, then, such mischief occurs from the irritation produced by the displacement of the bones, it is an imperative duty we owe our patient to put them in a natural position, and, if possible, to prevent them from moving, and injuring the soft parts; hence arises a question;—what position is the most natural, for instance, in fractures of the thigh,—injuries which so frequently lame the patient and disgrace the surgeon,—injuries, the results of which are too often living monuments of our want of skill.

What I have here stated, I must beg will not be misconstrued. I do not mean to arraign any particular kind of practice. I merely wish to shew that the common modes of treating these accidents require much amendment.

Desault laboured hard to prove, that, in fractures of the thigh, the straight position is the most adviseable. The arguments he brings forward in support of this doctrine are plausible; but, as far as I am able to judge, are not sufficient to support it. The principal are these: the facility of applying extension and counter-extension at a distance from the fractured bone; for instance, from the foot and the pelvis; the ease with which the two limbs can be compared, as to length and position,—the greater ease of this position to the patient, when compared to that on the side; the leg can be fixed more firmly; it can be adopted when both thighs are broken; and experience in France was favourable to the practice.

Were we to resign the privilege of thinking for ourselves, and mould our opinions upon the authority of others, however high, we should often fall into very avoidable errors. Implicit confidence is not required from man to man. Though this celebrated surgeon was accustomed to examine minutely the different diseases that came within his notice; yet it is to be expected that his numerous avocations must have sometimes disturbed that serenity of mind which the full consideration of many of them require. Under this impression, I trust I may venture, without fear of being accused of arrogance or presumption, to offer a few observations, which may tend to throw

some light on the mechanical treatment of injuries of so much interest to the patient as well as to the surgeon.

To judge correctly of the proper position of the limb in a case of fracture, we must take into consideration the natural form of the fractured parts, and also those powers which tend to displace the bone when broken. What then, for instance, is the natural form of the femur? not straight, as the practice of placing the limb in the straight position would indicate, but it forms a segment of a large circle, whose convexity is placed before, and concavity behind. The points of support, therefore, when this bone is placed upon a plane, with its concavity towards it, are the ends; and the effect of fracture through its middle would be, to divide the segment of a large circle into two segments of a small one; and the middle of the bone, being unsupported, would reach the plane, and the lower edges of the fractured ends would be exposed, prevented from uniting, and ready to prick and lacerate the surrounding textures.

Fractures may take place at any part of this bone, from its condyles to its very head; and it will be seen, that the direction of the fractured ends, and the difficulty of treatment, are greatly modified by the action of the muscles; the degree of laceration of their fibres at the site of fracture; the situation of the fracture; its direction, whether transverse, obliquely forward and upward, or, in other words, downward and backward, obliquely upward and backward, or, which is the same, downwards and forward; or obliquely to either side.

When the thigh is amputated high up, the flexors often act so powerfully as to place the stump, for a time, nearly at right angles with the pelvis; hence it must be evident, that when there is a solution of continuity in the bone, the muscles which tend most to displace the upper fragment, are the iliacus internus and psoas magnus; and the effect of their contraction is more or less powerful in raising the upper part, in proportion to the distance of the fracture from the point of their insertion, or the length of the lever by which they are resisted. But what muscles act most upon the lower portion, so as to produce displacement in the transverse direction? It will be recollected, that the fixed points for the action of the gastrocnemeus and popliteus are, in the natural state, principally the condyles of the femur; and that their contraction assists in the extension of the foot and flexion of the leg. But fixed points are considered as those which oppose the greatest resistance to the action of muscles; hence it will appear, that those points which, in the natural state, are the most fixed, may, after the accident, become the most moveable. If a muscle were attached to two bodies

which oppose an equal degree of resistance to a contraction of its fibres, these two bodies must move with an equal degree of velocity towards its centre; but if one of these bodies be more fixed, either by weight or length of lever, than the other, the lighter body must move towards the heavier or more resisting, in whatever manner the resistance may be produced. From this it will appear, that when a fractured thigh is placed in the extended position upon the heel, the fixed points for the action of the gastrocnemius and popliteus are, pro tempore, no longer in the condyles, but at the points of their insertion; therefore the contraction of these muscles tends to carry the lower fragment in a direction directly opposite to that of the upper; and this with a degree of force proportionate to the distance of the fracture from the lower end of the bone. If the solution of continuity be across the upper third, the transverse displacement, as far as the muscles are concerned, is principally produced by the action of the iliacus internus and psoas magnus; and if near or through the condyles, by that of the gastrocnemius and popliteus:—the former muscles move the part to which they are attached, upward and forward; and the latter, downward and backward; thus the upper portion is bent upon the pelvis; and the lower is bent upon the leg. The straight position puts these muscles into a state of tension, and consequently increases their power over the unresisting fragments. The transverse displacement being once produced, the extensors and long flexors of the leg are goaded into action, and assisted by the triceps adductor femoris, and if the fracture is high up, by the pectineus; they contract forcibly, and draw up the lower portion, which glides beneath the upper,—sometimes the distance of several inches; and at last comes in contact with it at a considerable angle. From these causes arise pain, spasm, inflammation, abscess, deformity, and lameness.—Other muscles tend to produce displacement in the transverse direction,—a displacement which must necessarily precede shortening of the limb.

From what has been said, it will appear, that the objections to the straight position, in a case of fractured thigh, are numerous and weighty.

Mr. Pott had the honour of pointing out the advantages we gain by bending the limb, and consequently relaxing the muscles, which tend most to disturb the fracture; and to forward his views upon this subject, he laid the limb upon the side in the half-bent position. In this posture the limb may be placed at any angle the case may require, and forms, from the trochanter to the foot, a line straight enough to lie sufficiently smooth upon a plane, provided the trunk also is placed upon the side; and if

the patient could maintain this position during the period of cure, the limb may be straight and perfect; but he soon becomes tired, and turns upon his back. By this rotatory motion, the trunk carries with it the upper fragment of the fracture, while the lower portion and the leg continue as they were placed; and hence arises eversion of the foot, a species of deformity which, in this kind of treatment, is with difficulty avoided, and is every day occurring.

Desault placed the limb in the straight position, because it better enabled him to apply extension at a distance from the fractured bone. Pott believed he could avoid the necessity of this by bending the limb. This, he conceived, would prevent the contraction of those muscles, whose action Desault endeavoured to resist. Practice, however, does not fully bear him out in his views upon this subject; for it is found that a mechanical extending force is sometimes necessary, even when the limb is in a state of flexion.

Surgeons have seen the mischief which arises from placing the limb in the bent position upon the side; and the advantages which accrue from relaxation of the muscles: they have, therefore, laboured to avoid the former, and to avail themselves of the latter indications. Their reflections upon this subject, have led to another plan,—the bent position upon the heel. This is not subject to the evils which attend the straight position, nor those which we observe in the bent upon the side. Of the three, this is the most easy to the patient, and is with the least difficulty maintained. It allows the limb to be placed at any angle the case may indicate, and consequently of the relaxation of those muscles, which tend more powerfully than any others to displace the fragments.

The common means made use of to keep the limb in this position are not without objections, and to these we must attribute the variety of plans we daily see adopted. Some practitioners adhere to this, while others follow that prescribed by Desault, or that advised by Pott.

But whoever attends strictly to the treatment of these injuries, will find that any one position, long continued, is extremely irksome to the patient, and in the young and irritable can scarcely be maintained.

For fractures of the leg the same positions are advised as for fractures of the thigh, and in these accidents the same advantages may be gained by relaxing the muscles; and several objections may be started to each particular mode of treatment.

When both bones are fractured, and the limb is placed upon

the heel, we daily see great difficulty experienced in keeping the fragments in apt and proper contact. The pads and pillows made use of for this purpose cannot be with sufficient nicety adjusted, to maintain the limb in that position which a favourable result requires. The surgeon, therefore, at every visit, finds something to attend to,—the heel is raised too high, and the bones consequently bowed backward, or it is sunk too low, and the fracture yields in an opposite direction. He is frequently obliged to replace his pads, pillows, brick-bats, and other contrivances, used to supply the deficiency in his splints, and as frequently produces more or less motion between the fractured ends. This motion much retards the union, and is one of those causes which prevent it altogether.

To the practice of placing the limb upon the side, the same objections may be urged as in fractures of the thigh; though they do not apply so forcibly to the former as to the latter cases.

That the motion of the body, in the direction I have mentioned, is the cause of the evertion of the foot, will, I think, readily appear by placing a subject upon the back, with the leg semiflexed and laid upon the side. Unless the leg be very much bent, the thigh and upper part of the leg will not come in contact with the plane upon which the subject lies. The heel, acting as a lever, keeps the foot everted, and thus the foot and lower part of the leg, forming points of resistance to the action of the adductors of the thigh, maintain the limb in a twisted position, which, if there be no solution of continuity in the bone, soon becomes painful; but if a fracture exists, the patient is quickly relieved by the rotatory motion which takes place between the fractured ends. This temporary displacement must be well attended to, or permanent deformity will certainly ensue.—I would contend not, however, for the practice of placing the limb upon the heel or upon the side, but for that practice which relaxes the muscles, and allows the patient himself to place it at pleasure, according to his feelings, upon one or the other without any danger of disturbing the co-aptation of the fractured parts.

I have just touched upon some of the causes of deformity and lameness, which too often result from fractures of the leg and thigh, in order that what I have to add may be better understood. I would have entered more fully into these causes, but I am fearful of extending my subject beyond the limits of a paper; and of intruding too much on the pages of your valuable Journal.

Having cursorily pointed out some of the difficulties we have to encounter in the treatment of these accidents, let us now enquire if there be any means by which we can avoid them. But before we enter upon this subject let us stay for a moment and

consider, wherein the means in common use fail to effect the desired end. The mechanical powers now commonly adopted to fix the fractured parts are either the short or long splints, the fracture box, or inclined plane.

In order to shew how far the short splints produce the effect for which they were intended, I made the following experiment:—I divided a stick half an inch in diameter, and two feet long, into two equal parts, and one of these I again divided into two parts of equal length. The two shorter pieces I intended to represent the two fragments of a fractured thigh, and the longer the leg in a natural state. I then connected, by means of a hinge-joint, one end of the longer piece with one end of one of the shorter, and having brought one end of each of the shorter pieces into contact, as they lay in a straight line, surrounded the shorter pieces their whole length with muscular fibre, one inch and a half in diameter, placed in the logitudinal direction, and secured with small twine. Over the muscular fibre, I laid slips of deal in the usual way of putting up a fractured thigh, with short splints, and confined them with tapes moderately tight. Having laid the whole upon a plain surface, I rotated the longer piece uncovered by muscular fibre, and found, as I expected, that the motion was lost between the shorter pieces; and that no motion was given to the upper of these except what was communicated to it through the medium of the muscular fibre; and that the centre of every kind of motion which did not loose itself in the hinge-joint, was placed between the approximated ends of the shorter pieces. From this experiment it appears, that when the thigh is broken and put up with short splints, by which I mean splints that extend from the pelvis to the knee, motion given to either end of the limb is lost in the site of fracture.

But it may be said, that these splints are to be confined upon the limb not only moderately but very tight. Still, I would ask, is this to be recommended? Though the pain and tension which too powerful compression of the thigh produces, may be materially prevented by the judicious application of a bandage, yet there remains another objection to this practice, which ought to engage our attention, and this is the danger of pressing a portion of the soft parts between the ragged ends of the broken bones, a circumstance which would prove an almost insurmountable impediment to the very thing we are most anxious to bring about, a good and speedy union. Again, if we did not, by such tight compression, incur the danger of forcing a portion of the soft parts between the fractured surfaces, we could not, consistently with the safety of the limb, put the short splints on sufficiently close to prevent any motion from taking place in

the situation of the fracture, when either end of the limb is moved. These splints, therefore, fail to accomplish the purposes for which they were constructed; they fail to maintain the proper co-aptation of the fractured parts, and to prevent any motion between them.

What I have here stated with regard to the short splints for fractures of the thigh, will also apply in some measure to those in common use for fractures of the leg. They do not provide against motion which impetus given to the limb, produces in the fracture; there is nothing in their construction to support the heel and sole of the foot; parts which in the treatment of these accidents deserve our serious attention; nor unless they are kept very tight upon the limb is the lever above the knee sufficiently long to guard against evertion.

They are simple, however, and easy of application, but when we have an important object to accomplish;—when the limbs or the lives of our fellow-creatures are in danger, utility and efficacy must be bornee in mind. Is it no small matter to suffer the pain and inconvenience arising from these injuries, and afterwards to be deformed and lamed for the remainder of our existence? It has been said, that we should bring down our mechanical contrivances to the comprehension of the dullest capacity. This is a good rule, and should be as far as possible adhered to; for simplicity, combined with utility, is excellency in these things. But if I were called upon to define what I mean by the term simplicity, as applied to a piece of machinery, I should say, it signifies that which answers the same intentions by the fewest means; or that which has in it all that is useful and nothing superfluous; and I cannot help thinking, that surgery stands in need of this kind of simplicity in the construction of its instruments.

If we consider the motions of the limb in the natural state, we shall find, that the leg is passive to the motions of the foot; the thigh to the motions of the leg; and the pelvis to the motions of the thigh; hence we should infer, that if the foot and thigh were fixed by a continuity of splint, the leg must of necessity become fixed also; and if the foot and pelvis could be fixed so that no motion could take place in the one without passing over to the other, the thigh also would become a fixture.

To illustrate this point, and to see what we gain by fixing the whole limb, in the treatment of fractures, I covered not only the shorter pieces of the stick above mentioned, but also the longer with muscular fibre, while they remained in the same relative position as described in the last experiment; and having fixed a cross bar to the lower end of the longer portion, I ap-

plied slips of splint two feet long,—the length of the three pieces upon the muscular fibre; and confined them to this and the cross bar, with small twine. The whole was now placed upon a plane, and rotated and moved in different directions, by applying the hand to the cross-bar; and it was found that any motion given to the cross-bar, which was intended to represent a foot-board, was not felt between the approximated ends of the shorter pieces, but was propagated over them, and lost at the upper end of the splints,—a situation intended to answer to the hip-joint in a case of fractured thigh.

This experiment, rough as it is, is sufficient to shew, that when the thigh, leg, and foot are fixed, by any inelastic body continued from the one to the other, motion between the fractured ends of the thigh-bone, from an impetus given to the limb below the site of fracture, is effectually prevented.

It will be seen, from what was stated in the first experiment, that the advantage here gained arose from fixing the splints to the cross bar; hence it must be evident, that any motion given to the upper of the shorter pieces, which was in no way connected to the splints, by applying the fingers to its projecting end, would still have had its centre between the lower end of this piece and that with which it came in contact. This is precisely what would occur in a fractured thigh put up in the manner indicated by the last experiment, if the pelvis could not move upon the femur, and if it were unconnected to the splints which fix the knee and ancle. But it will be recollected, that the pelvis has free motion upon the thigh in every direction; therefore it is not necessary that the upper fragment of the fracture should move if the pelvis moves.

Supposing the lower part of the limb not under the command of the patient, those movements of the pelvis which carry it out of a line with the thigh bone, must necessarily affect the fracture; but if the whole limb is fixed to the hip joint, and the fracture is not so high up as to prevent the splints from holding the upper fragment firmly, the patient is able to direct its motions upon a plane, whether the limb be bent or straight, and therefore can make it follow the motions of the pelvis, and consequently has it in his power to avoid the displacement which might otherwise ensue.

But it will be seen from what I have advanced, that if the pelvis could be fixed upon the thigh by a continuity of the same means that fix the foot and leg, motion given to either end of the limb would be still less likely to affect the fractured parts. Supposing the limb, with the thigh-bone, fractured, put up as the last experiment would indicate, motion given to the foot

would not have its centre in the hip-joint, but would pass over it to the pelvis; and if given to the pelvis, it would not be felt in the site of fracture, but would be propagated along the splints to the foot, which, however, would not feel it but in common with the leg and thigh: and as far as it regards the motion given to the limb from external causes, this would be the case, whether there exist, between the pelvis and the foot, one fracture or a dozen. Hence it would appear, that any plan which would enable us to fix the pelvis upon the thigh by the same means that fix the foot and leg, is in some respects desirable.

If what I have advanced be found to be correct, the treatment of fractured legs will become extremely simple, and that of fractured thighs comparatively easy.

Desault knew that some advantage was obtained by fixing the whole limb in fractures of the thigh, but he seems to have made use of the long splint, in order to keep up extension in the straight position, and at a distance from the fractured bone.

Mr. Pott was convinced that much benefit was derived from relaxing the muscles, which tend most to displace the fracture. This is a matter of no small importance, and the profession must ever feel much indebted to him for what he has given to the world upon this subject.

I am aware that the limb can scarcely be placed in any one posture, which would not, by relaxing some of its muscles, produce a degree of tension in others; and though Mr. Pott has stated, in round terms, that the limb is to be placed in such a manner "as shall relax the whole set of muscles belonging to or in connexion with the broken bone," and in another place, "all the muscles of the limb," yet I am disposed to think, that his expressions upon this subject should not be taken in their literal sense,—that he could not have been ignorant of the impossibility of relaxing all the muscles of a limb at once, by placing it in any one position; and therefore would naturally have taught, would naturally have directed us, as a principle of treatment in these cases, to relax, as I have above stated, all those muscles which tend most to displace the fracture.

In a case of fractured thigh, Mr. Pott's practice was to place the limb upon the side, on a short splint; but this method is open to several objections. The skin pressed by the weight of the lower part of the body, between the great trochanter and the splint, soon becomes tender, and frequently inflames and ulcerates. The patient, to relieve himself from an irksome and painful position, turns upon his back; hence arises evertion of the foot, and consequent deformity. These effects are not constantly, but frequently occassioned by this mode of treatment.

The fracture box and the inclined plane, which is a simplification of the fracture box, are certainly improvements in the treatment of these accidents. Supposing the limb to be placed in the erect position, the fractured ends of the bone would be drawn in opposite directions; the upper forward by the action of the flexors of the thigh; the lower backward by the action of the gastrocnemius and popliteus: therefore, by placing the limb upon an inclined plane, we gain three points of evident advantage:—we weaken and resist the action of those muscles which tend to displace the lower fragment; and, by bringing up the limb upon the pelvis, we relax, and consequently weaken the action of the iliacus internus and psoas magnus, and place the patient in a position most easily maintained.

But there are some objections to the use of these instruments, which must not be passed over in silence.

The fracture box and inclined plane are mounted upon wide frames, which prevent them from sinking into the bed upon which the patient lies. It is not so, however, with the nates. These and the trunk, by their gravity, cause the bed to yield, and in proportion as this gives way, the upper part of the thigh is forced against the corresponding end of the instrument, which, from this cause, occasions pain, tumefaction, and sometimes abscess. Again, in a case of fractured thigh, when the patient uses the bed-pan, the upper fragment, following the direction of the pelvis, is raised from the instrument, and motion is produced in the site of fracture. Are not these indications which point out most clearly, that any machine made use of for fractures of the leg and thigh should be entirely passive to the motions of the limb?

It has been said, that in fractures of the thigh it is sometimes necessary to apply extension, notwithstanding the limb is placed in the bent position. When this is required, I am disposed to believe, that the extending means should be made to act upon the lower end of the bone, or as near to it as possible;—not, however, by applying a ligature round the limb, but by some means which would bring down the lower fragment by acting upon a large portion of the thigh, or back of the leg.

To this plan I have not yet been able to discover any particular objection, and therefore think it preferable to extension in the straight position, to which the following may be started.

First, Its effects upon the natural curvature of the thigh-bone, which ought to be maintained. Second, It increases the power of the muscles, which tend to produce displacement in the transverse direction. Third, It acts upon two sets of ligaments before the fracture is effected. Fourth, The natural figure of

the limb forming curved lines in the inner and outer sides, is unfavourable to the practice.

The last of these objections may be easily got over by any means, extending from the pelvis to the foot, which would enable us to fix the thigh and knee, and at the same time keep the leg and foot as much to the outer side of the line of the femur as is natural to the patient.

In the treatment of fractures of the lower extremity, other indications should be borne in mind besides those I have endeavoured to point out.

In consequence of high action, arising from contusion or other causes, it is sometimes advisable to place the limb high above the bed, and to lower it at pleasure without any danger of disturbing the fractured parts. This position favours the return of blood, and lessens arterial action. Further, it is proper that the limb should be fixed, so that the patient may have over it a sufficient power to place it, and to keep it in that position to which the trunk inclines.

Indeed, in the treatment of these or any other affections, we should use our utmost exertions to avoid all those circumstances which retard the cure, or render it imperfect, and avail ourselves of all those indications which reason and experience teach us contribute to a favourable result. For the treatment of fractures of the lower extremity, there is no contrivance that I am aware of hitherto given to the world which is capable of effecting these purposes; therefore, any machinery which could be made to avoid the one, and at the same time embrace the other, would, in my humble opinion, add much to the success of our practice, and to the ease and comfort of the patient during a long and tedious cure.

From what I have endeavoured to point out, I think it will appear, that, in the construction of any machine for fractures of the lower extremity, the following indications should be borne in mind.

1. It should fix the whole limb, so as to admit of no motion whose centre is not in the hip-joint, or between the pelvis and the back. 2. It should maintain the fractured ends in a natural position, and in perfect co-aptation. 3. It should lie upon the limb with ease to the patient. 4. It should enable the surgeon to place the limb at any angle the case may require. 5. It should allow of the application of extension and counter extension, when the limb is in the bent position. 6. It should be entirely passive to the motions of the limb, and should allow the patient to place it in any position most congenial to his feelings, either on the heel or on the side, and to alter this position at pleasure.

7. It should enable the attendants to move the patient from place to place, without any danger of displacing the fractured ends. 8. It should allow of being adopted to limbs of different lengths and different sizes. 9. It should be applicable to fractures in any part of the limb, and of all kinds, whether simple, comminuted, or compound. 10. It should be simple and easy of application. 11. With all these advantages, it should ensure to the patient a speedy recovery, and a straight and perfect limb.

To answer these purposes, I have made use of the following contrivance: To fix the limb, and to allow it to be bent and fixed at different angles, a piece of beech slightly hollowed out to receive the back of the thigh, thrown a little out of a straight line to answer to the natural curvature of the thigh-bone, and gradually narrowed towards the lower end, was connected by means of a hinge-joint to another piece of beech slightly excavated to receive the calf of the leg, and gradually narrowed towards the lower extremity to answer to the natural form of the limb. From the situation for the calf to the inferior end, this piece was made a little concave, simply to prevent the pad upon which the limb is placed from shifting its situation. Both of these pieces were cut out of $1\frac{1}{4}$ inch board, and that for the thigh was left one inch thick for two inches from its lower end, for the purpose of receiving on each side a brass-eyed screw; and that for the leg one inch thick, and the same width for six inches from its lower end. A bit of beech, a little longer and wider than the foot, was cut out at one end to receive the leg-piece at right angles. This was intended for a foot-board. It was one inch long and one broad, where it lay upon the side of the leg-board; and as they lay at right angles, the receiving end of the foot-board and the received part of the leg-piece were bored transversely, so that they may be fastened together by means of a bit of wire. That part of the foot-board which lay upon the concave part of the beech intended for the leg, was a little rounded off at the edge nearest its lower end, so as to give it a hinge-like motion in a direction from right angles over the lower end of the leg-piece.

To fix the pieces of beech intended to support the leg and thigh, and to allow of their being placed at different angles, I had a thin rod of steel, connected at one end by means of a hinge-joint to a short pillar of brass, fixed by screws to the middle of the back part of the leg portion. To the other end of this rod was fixed, by a hinge-joint, a brass foot about an inch and half long, and one-fourth thick, with a hole in its centre, a little narrower in the transverse than in the longitudinal direction; and another hole in its side, which traversed the one in the centre trans-

versely. To the side of the brass foot was fixed a bit of brass, with a spring in the form of a flute key, and at that end of the key which answers to the part that stops the hole in a flute, was fixed a steel pin, which was made to pass into the hole in the side of the brass foot, and cross the hole in its centre. A narrow piece of brass, with five stays projecting from its surface, was fixed to the back of the thigh portion. Each of these stays was of the form and size of the hole in the centre of the brass foot, connected to the steel rod, and each had a hole transversely to the plate upon which they were arranged, large enough to admit the pin made to traverse the hole in the side of the brass foot. They were placed at a distance sufficient to allow the thigh-piece to be fixed to that intended for the leg, either straight or at right angles.

It will be seen, that by pressing the key, the pin attached to it, as above described, would be drawn out of the hole in the centre of the brass foot-piece, which could then be made to receive any one of the stays on the back of the thigh-piece; and, once received, we have only to take the finger from the key, and the steel pin is forced, by the re-action of the spring, through the hole in the centre of the stay, and, consequently, the two pieces of beech may be fixed at any angle the case may indicate.

To prevent the effect of moisture upon the steel rod, it is advisable to have it coated with brass or tin, which may be easily done; but this is not required except for hospital practice.

But it is proper that the instrument should be applicable to limbs of different lengths. The thigh and leg-pieces must allow of being shortened more or less according to the length of the limb. To answer this purpose, as far as the leg-piece is concerned, a number of holes of one size should be bored, in a line transversely to the lower end of the leg-piece, and then we have only to draw out the wire which fixes the foot-board to that intended for the leg, slide up the former upon the latter, and fix them where we please.

The length of the thigh portion, however, is not so easily altered; but this may be done by a thin plate of brass the width of the thigh-piece, and five or six inches long, according to the size of the instrument. When hammered out to lie upon the hollow part of the thigh-piece, and turned off at its upper end, this plate had attached to it two thin plates or bars of steel, of its own length, and about half an inch wide. As much of one end of each of the steel plates as was equal to the thickness of the wood of the thigh-piece, was bent at right angles. They were then placed upon the back of the brass plate in the longitudinal direction, and the bent extremities united to it just below its upper

end, and within half an inch of its sides. Having now placed the brass plate upon the wood, and the steel plates or bars behind it, I had nothing to do but unite the one to the other, through two long mortises in the wood, in such a manner as would enable me to slide the brass plate up and down, or fix it upon the wood at pleasure. To answer this purpose, two male screws were fixed to the lower end of the brass opposite the steel plates, and made to pass through the mortises in the wood, and two corresponding mortises in the steel plates, upon which they were fixed by female thumb-screws. By means of the female thumb-screws, the brass plate could be fixed or made to slide upon the wood, so as to enable us to lengthen or shorten the instrument, according to the length of the femur; but this is not at all required, except for fractures of the thigh.

But legs are of different thicknesses, as well as of different lengths; one man may have a larger calf or a longer heel than another; and these should engage our attention. To enable us to adapt the same instrument to different degrees of thickness in the calf or length in the heel, we may make use of a leather shoe, open from the toe, with a wooden sole, suspended from the top of the foot-board by means of a strap and buckle. The strap should be fastened to the bottom of the wooden sole in a groove, and made to pass over the top of the foot-board, which should be furnished with a buckle near the end that comes in contact with the leg-picce, in order to receive it. The strap should be let a little into the top of the foot-board, that it may not shift its situation. The sole of the shoe should be confined closely to the foot-board by a strap and buckle passed round them. The same intention may be answered by making the sole of the shoe to slide in a groove in the foot-board, upon which it may be fastened by means of a thumb-screw. The leather of the shoe is intended to wrap over the in-step, and to be confined upon it with straps or ribbons.

This shoe is intended to answer three indications; to raise the heel from the leg-piece, or lower it, as the case may indicate; to prevent any lateral or rotatory motion between the fractured ends of the bones; and to form an easy bed for the heel.

The whole of what I have described is necessary for fractures of the thigh; but for fractures of the leg the brass plate may be dispensed with.

Besides the parts I have mentioned, three common short thigh splints are required for fractures of the thigh; one on the outer, another on the front, and another on the inner side of the thigh. The first should extend from the upper part of the great trochanter to the lower part of the outer condyle; the second from the

great trochanter to the patella; the third should lie upon the triceps adductor femoris, and should extend from the pelvis to the lower part of the inner condyle. These, with the assistance of the thigh-piece, may be made gently and regularly to compress the muscles, and prevent any straps or tapes made use of to secure them from injuring the soft parts. The one placed upon the front of the limb answers another indication, that is, to resist the action of the flexors of the thigh.

For fractures of the leg, three short splints are also required; one on the outer, another on the inner side of the leg, running from the head of the tibia or the condyles of the femur to the sole of the foot. These differ but little from the common short splints for fractures of the leg. Each of them has a small hole at the lower extremity, which corresponds with one on the same side of the foot-board. They are a little narrower, and the holes for the ankles are made to answer to the situation of the malleoli, the one for the inner ankle being nearer the anterior edge of the splint than that for the outer. These splints steady the foot more perfectly, and enable the patient to lay the limb upon the side. The third splint, which is composed of half beech and half thin slips of deal, turned up a little at either end, is intended to lie upon the front of the leg. This prevents the upper fragment of the fracture from being at all displaced by pressure on the calf, and preserves the integuments on the shin from the action of straps or tapes.

I have used the instrument above described in a variety of cases, and have not yet been able to discover any thing material that militates against it. In confining the different splints upon the limb, I have made use of leather straps armed with buckles in preference to tapes, as the necessary degree of pressure can be better and more easily regulated with the former than the latter, and as there is no danger of their giving way. In order to fix them to the instrument or remove them at pleasure, I have usually had some studs put along the middle of the back of the instrument, and a strip of leather near each side, for the straps to pass under.

Having described the different parts of this instrument, we now pass on to its application. This is modified by the state of the soft parts and the situation of the fracture. The surgeon should bear in mind the principles of his science, and act up to them in every instance. If no particular angle is indicated by the nature of the case, the semiflexed position is the most easy to the patient, both in fractures of the leg and fractures of the thigh. Whether the fracture be in the leg or in the thigh, the limb should be placed upon the instrument as soon as possible

after the accident, and this is the more necessary in proportion as the displacement is great or inflammation high; but as long as the irritation continues it is not advisable to apply the short splints upon the fractured bone.

In a case of fractured leg, before the irritation has subsided sufficiently for the application of the short splints, the limb should be put up in the following manner:—The surgeon, having procured an instrument, should fit it to the sound limb. The hinge which connects the leg and thigh-pieces should be placed immediately under the knee-joint, and the foot-board brought up close to the foot. He should then superintend the construction of a pad, made thickest at the part which is intended to lie under the small of the leg, and long enough to cover the leg and thigh-pieces, upon which the limb is to be placed. A tape should be placed transversely upon the back of the foot-board near its loose end, under a strip of leather, placed there to prevent the tape from slipping down to the end of the leg-piece. The ends of this tape should then be carried from the sides of the foot-board through the corresponding brass eyes connected to the sides of the thigh-piece, and left hanging. The instrument being now properly adjusted, two assistants should raise the fractured limb, one the foot and the other the upper fragment, while the surgeon places the instrument, properly padded, beneath it. The instrument being in a line with the limb, and the hinge under the knee, the assistants should be directed to lower the limb gradually upon it, and place the heel in the shoe. Then, having placed a splint upon the top of the thigh, and another on the inner side upon the triceps, two or three straps should be carried round the thigh upon the splints, so as to make very little pressure upon the limb. One of the straps, drawn rather closer than the others, should pass over the condyles of the femur, to keep the knee from rising from the instrument when the limb is moved. The only use of the short splints placed upon the thigh in fractures of the leg, is to prevent the straps that fix the thigh upon the instrument from injuring the soft parts. The tape made to cross the loose end of the foot-board should now be drawn as tight as is comfortable to the patient, and tied upon its back. The tape is intended to keep the foot-board close against the sole of the foot, which should be left extended a little beyond a right angle with the leg. The leather of the shoe should now be laid over the instep and toes, and secured as close as the patient can bear it with ease. The limb being thus put up, the foot of the instrument should be raised, and the patient left upon his back, with the limb upon the heel. In this state, leeches, cold lotions, &c. may be applied;

the patient's bowels may be freely evacuated; he may have his bed made daily, &c. without any danger of disturbing the fracture, if care is taken not to turn the instrument to either side. As soon as the irritation is sufficiently got under, the short splints should be applied to the leg, and confined moderately close with two or three circular straps, taking care that the beech of the front one is placed upon the tibia. A tape should now be passed through the small hole in the lower end of each of the side splints, and through the corresponding hole in the foot-board. These tapes should then be brought together on the back of the foot-board, and tied. The straps upon the thigh, having been drawn a little closer, the patient may be furnished with a sling which should be fixed so as to act upon the heel of the foot-board and lower end of the leg-piece, and desired to get up and place his limb across a chair, or walk about at pleasure on crutches, with a caution not to move the limb but by means of the sling. The sling should not be taken off the instrument night nor day during the period of cure, as it gives the patient perfect command over the lower part of the limb, and enables him to place it in any position he pleases.

For fractures of the thigh it is proper to make use of the apparatus for lengthening the thigh-piece, unless the instrument be made to the measure of the limb.

The instrument, with this apparatus attached to it, should be placed under the sound limb, and fitted to the leg and foot, as for fractures of the leg, and the thigh-piece should be regulated so as to reach from the bend of the knee to within half an inch of the tuberosity of the ischium. The pad should be made a little longer than the instrument, that it may fall a little over its upper end, and be thick enough at this part, when compressed, to fill up the space left between the end of the instrument and the tuberosity of the ischium. The surgeon should superintend the making of this pad; for it is of importance in two respects. If the thigh-part of the instrument be nicely adapted to the length of the thigh, it will tend to keep the broken bone of the same length as the sound one, by its pressure against the tuberosity of the ischium and upper part of the back of the leg; and if its upper end be sufficiently protected, it will not inconvenience the patient by its pressure upon the soft parts.

When there is much contusion or inflammation of the soft parts, the instrument, properly adjusted to the length of the sound limb, should be applied in the following manner:—Two assistants should raise the limb from the bed while the surgeon places the instrument beneath it. The limb being placed upon the instrument, the foot-board should be properly fixed with the

tape, and the foot secured in the shoe, as described for fractures of the leg. A strap or two should then be passed round the leg upon the instrument, and a bit of splint padded and placed upon the shin. The leg and foot, being thus secured, and a long broad strap with a sliding pad attached to it, being previously carried between the steel bars and the brass plates, one assistant should keep the upper end of the instrument close against the back of the thigh, while the other, by extending from the knee, draws down the instrument, and with it the lower fragment, till the upper end of the instrument comes anterior to the tuberosity of the ischium, in the same manner as when it was placed upon the sound limb. The surgeon having ascertained this point, and that the bones are in apt and proper contact, the broad strap placed at the upper end of the instrument should now be made to cross upon the front of the thigh, pass round the pelvis and buckle.

This strap keeps up the instrument against the back of the thigh, and serves to connect it with the pelvis, and therefore the instrument and lower part of the limb are made to follow those motions of the pelvis which tend to disturb the fracture.

The whole length of the thigh is left bare, and little or no impediment is given to the circulation. The limb thus secured should be left resting on the heel, with the patient on his back.

As soon as the high action is sufficiently got under, which is usually in the course of two or three days, the short splints, properly padded, should be placed upon the limb, and secured with three or four straps. The broad padded strap previously passed round the thigh and the pelvis, should now be carried under the leathers or tapes usually placed upon the back of the short splints; made to cross upon the outer of these splints; and again pass round the pelvis, and buckle. This strap keeps the upper ends of all the splints close upon the upper fragment, and serves to connect them with the pelvis.

If the broken ends of the bone do not ride; and if the fracture be not so high up as to prevent the upper fragment from being held firmly by the splints, the patient may now be allowed to place his limb upon the side or upon the heel, and alter the position at pleasure,—not by means of a sling, however, as in fractures of the leg, but by placing his finger under one of the straps surrounding the lower end of the thigh, and at the same time, taking care that the pelvis and the limb move together in the same direction.

During the cure, it is necessary that the surgeon should attend to two points particularly. He must see that the instrument does not ride over the tuberosity of the ischium. He

must take care that the patient does not move the limb by the exertion of its own muscles, but by the assistance of his hand. The reason of these two directions will immediately appear. The riding of the instrument would indicate that the fractured ends of the bone over-lap; and if the patient attempts to move the limb, by its own powers, he would incur the danger of displacing the upper fragments; for the muscles surrounding the fracture are not of a texture capable of opposing much resistance to the lateral displacement, which their own contraction would tend materially to produce.

If further extension and counter-extension be necessary, which I am disposed to believe will seldom be the case, the patient should be placed on his back, diagonally upon the bed. Extension may be then made by a tape, which should be fastened to the brass eyes on the sides of the thigh-piece, thrown over a pully at the foot of the bed-stead, and made to suspend a weight sufficient for the purpose for which it was intended. The tape, before it passes over the pully, should take the line of the thigh-part of the instrument, at whatever angle it may be placed, and whether it lies upon the heel or upon the side; it will therefore be necessary for the pully to be suspended from the ceiling, the foot of the bed-stead, a forked stick, or any other means suited for the purpose. If the stick be used, it should have a number of holes bored through it transversely, and should be cut down the centre to receive the pully, which may then be fixed at any height, by a wire passed through it and the corresponding holes in the stick.

For fractures of the leg, the instrument applied in the manner above described answers every indication for which it was constructed; and it has been found successful in every case of fracture of the leg and thigh for which it has been used.

Having described the instrument, and the different modes of applying it in simple fractures of the leg and thigh, which vary according to the situation and state of the injury, I need only subjoin a few cases, to shew its superiority over the means in common use, as to the comforts of the patient, and the rapidity with which he obtains a perfect cure.

I was favoured by Mr. Travers with the treatment of the following case of fracture of the thigh:—

Case 1.—Thomas Barwick, æt. twenty-six, was placed under my care December 17th 1821, for a simple fracture of the thigh, across the middle. The injury was occasioned by the wheel of a cart which passed over the limb. Considerable contusion and

tension followed the accident; but the muscles were tranquil, and the fractured ends of the bone did not appear to ride.

I saw him the fourth day from the time of the accident, and applied the machine. He had his bed made directly after, and had it repeated during the cure as often as he wished; and placed his limb in any position most congenial to his feelings, either on the heel or on the side, and altered this position at pleasure.

January 17th, he got up with the instrument on, and walked about on crutches, supporting his limb in a sling. At the end of five weeks from the time of the accident, the machine was taken off; and at the end of six, the man was able to walk without crutch or stick, and had a straight and perfect limb. As there was still some weakness about the muscles of the thigh, he was desired to steady himself a little longer with a crutch or stick.

He has since informed me, he was able to carry a sack of malt, the distance of fifteen yards, ten weeks after the accident.

Case 2.—I feel indebted to Mr. Key, assistant surgeon of Guy's Hospital, who kindly offered me the treatment of the following case:—

Mary Lovel, æt. forty-five, February 8th, 1822, slipped off the flag-stones, and, her foot twisting under her, she fell and broke the tibia and fibula just above the ancle-joint.

Fourteen days after the accident, I saw her. The tension and pain were then very great, and the foot was lying in the extended position where it was kept by the spasmodication of the gastrocnemii muscles, and the fractured end of the lower portion of the tibia threatened to come through the skin. I was informed, that the symptomatic fever had run high. She had been out of bed in a delirious state. Leeches, fomentations, and cold lotions had been applied, and had in some measure reduced the inflammation and tension.

The machine was now lightly applied upon the limb. 24th, The pain and tension having materially abated, the short splints were placed upon the leg, and the straps were drawn moderately tight, and the woman desired to sit up with her leg across a chair. In a few days she was able to walk about the room with the assistance of crutches. Three weeks after the application of the machine, the bones were found firmly united, and the limb was straight and perfect. The machine was now taken off, and she was desired to walk about the room with crutches bearing lightly upon the foot at every step. In six weeks and two

days she was able to walk without crutch or stick; but did not throw aside the crutches altogether till the end of the seventh week.

Case 3.—T. C. æt. fifty-five, March 28th, 1822, fell from the step of a carriage, and, his foot twisting under him, the tibia was fractured obliquely into the ancle-joint, and the fibula a little above it. He was put to bed with the limb upon the side. Ten leeches were immediately applied to the part, and the bleeding promoted by fomentation. 29th, The machine was applied, and the leg kept wet with sedative lotion. He had considerable symptomatic fever, which was removed by a strong purgative. 31st, The active inflammation having subsided, short splints were applied to the leg, and the man ordered to get up and put his limb across a chair,—April 1st, the fourth clear day after the accident. He was up yesterday, and has been walking about this morning with the assistance of crutches, supporting the limb in a sling, but not without considerable pain when the limb was hung down. The pain in the part soon returned to its former state upon placing the limb in the horizontal position, and in the course of a few days it became immaterial to him whether the limb was placed upon the floor or upon a chair. 13th, He was seized with a pleuritic attack, which confined him to his bed three days. 22d, The twenty-fourth clear day after the accident, the instrument was taken off, and the bones were found straight and firmly united. 23d, Soap plaster and a bandage, being applied, he was desired to walk about with crutches, bearing lightly upon the foot at every step. Five weeks after the accident, this man was able to walk across the room without crutch or stick; but as he had not yet full power over the muscles of the leg, he was desired to steady himself with one or the other a little longer.

Case 4.—A lady of rank and fortune received a blow from the heel of a horse, as she was on horseback, on the lower part of her stirrup leg. The force fractured the fibula about two inches and half above its lower extremity, and the tibia an inch and a half above the point of the inner malleolus. Eight weeks after the accident, finding she had no power over the limb, she came to town to consult Sir Astley Cooper, and by his recommendation requested my attendance. The fibula was at this time united close to the side of the tibia, and the leg deformed in consequence; but distinct crepitus and preternatural motion still remained between the fractured surfaces of the tibia. The machine was applied, and in five weeks and three days the tibia also was found firmly united. During the cure, the lady walked about with the assistance of crutches, carrying the limb in a

sling; received company; or took an airing in her carriage at pleasure.

I might add other cases, but these are sufficient to shew the utility of the instrument I have endeavoured to describe, and the validity of the principles upon which it was constructed.

In speaking of the mechanical treatment of fracture, it might have been expected that I should say something upon the use of plasters and bandages; but as it regards the treatment of simple fracture, I have nothing to add to the general plans which would prove interesting to the surgeon, or useful to the patient. What I have to say upon this subject will come in better with some observations I have to offer upon the great advantages which arise from the use of this instrument, in dislocations of the knee and ancle, compound fracture, and cases of non-union; but these I must reserve for a future period.

82, *Great Surrey-street, Blackfriars-road.*

[It is but justice to Mr. Amesbury to say, that many of his additions and corrections to this valuable paper were received too late for insertion; and we trust our readers will overlook any of the slight inaccuracies of expression, &c. incident to an unpractised writer, though an able surgeon.—ED.]

HISTORY OF A CASE OF STRANGULATED SCROTAL HERNIA; WITH REMARKS. BY MR. T. TUCKER, M.R.C.S. &c.

To the Editor of the Quarterly Journal.

SIR,—HAVING accidentally become possessed of the following case, I think I cannot dispose of it better than by sending it to you. Circumstances assure me of its authenticity. I have no opportunity of asking the author's permission to this step, but cannot suppose he could object to it.—I am, your obedient servant. A. B.

1816.—R. L. ætat. fifty-four, had, for nearly forty years, laboured under a large scrotal hernia, during the last ten of which it had been irreducible. It had frequently been strangulated, but had never required the aid of a surgeon, until about the 22d of July, when he sent for a medical man in the neighbourhood. Every thing was attempted to remove the stricture, but without success, and on the 27th, I was requested to see him. I did so; but finding the symptoms by no means pressing, and as he had had several stools three days previous, I saw

no necessity for an immediate operation. There was no pain or tension over the abdomen or parts beneath the stricture, and I directed that unless tension with restlessness, and fæculent discharge, should ensue, no variation of treatment should be adopted. Such was the state of things until the morning of August 1, which was near a fortnight from the period of his attack, when the symptoms of strangulation and inflammation were very evidently increasing. About eleven that evening, I saw him, when, finding that the tobacco (which produced great debility), and all other methods of procuring relief, had been used in vain, I did not hesitate to recommend the immediate operation. At this time, the size of the scrotum was immense, and it had more the appearance of a third thigh than any thing else I can describe. It was very painful on pressure; and if this was applied to any parts of the abdomen, considerable uneasiness was produced. A senior practitioner in the town also saw it, and his opinion coincided with mine, that nothing but the operation would afford relief. The parts having been shaved, we commenced the operation by an incision of nearly four inches in length, and by a cautious dissection, laid open the different coverings of the intestine. As might be expected, the sac was very much thickened.

Now follows the most interesting history of the case. Through the opening of the sac, the greater part of the colon passed, which, to its very bottom, was firmly attached. The next step was to divide the stricture, and on this being done, the intestine directly became flaccid. To return the portion that was down was impossible, without dividing the adhesions, which formed one continued mass from the upper to the lower part of the sac. This, I do not hesitate to say, was nearly a foot in length. Reflecting on the mischief which would ensue from such extensive dissection, I urged the necessity of being content with having removed the cause of the passing symptoms. This was acceded to; but an embarrassing and very unsatisfactory circumstance presented itself. It was this: As nearly the whole of the colon was exposed, and there were no integuments to cover it, what was to be done?—I here decided, that the parts should be covered with lint simply, and left to nature. This we did, expecting that her debt would shortly have been paid; but, singular to relate, every function returned, the stools became natural, and little constitutional irritation ensued. At the time of the operation, I observed a good deal of coagulable lymph on the surface of the intestine; into this vessels shot, by which it became converted into granulations. These have progressively cicatrized, and, by contraction, have brought the integuments to

within an inch of each other, which, at the time, and for several days after the operation, were distant at least seven inches. After this the integuments still continued to approximate, and the tumor in the scrotum and groin to diminish; and by the 7th of September, the wound was perfectly healed, and his health completely re-established.

OBSERVATIONS ON THE CASE.

IT being a general rule in large inguinal herniæ, that are irreducible, not to lay open the sac, but simply to divide the stricture, it will perhaps appear, that in doing it in this case, we deviated from the principles of surgery. At the time, I certainly much regretted it, but now see no cause, as we were guided, in a great measure, by the history which the patient himself gave of the case. He stated, that previous to his last attack, only a small portion of intestine was down, and that the severe symptoms followed an unusual increase of it; so that we were led to believe the greater part of it would have been returned to its proper cavity. In this we were deceived, for the whole was firmly adherent from the ring to the very bottom of the sac, and appeared at the time to be rather the natural than the unnatural situation of the intestine. There was no omentum down, and the gut had already become much inflamed; but this immediately subsided on the removal of the cause.

Thus favourably terminated this case, which has been the most truly interesting that I ever witnessed. Had the cohesions been divided, death must have followed, for no powers of the constitution could have withstood the inflammation that must have ensued from such division.

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*Cases of Trepan, by M. M. Wunsch and Walther.**

JOSEPH NEID, a healthy boy, four years old, fell from a ladder upon the ground, where he remained without any sign of life. When brought by his father to M. Wunsch, he was soporose, with laborious breathing, and long-continued fits of trembling. The pulse was full and hard; the eyes shut, the pupils being expanded

* Neue Bibliothek für die Chirurgie, &c. Von C. J. M. Langenbeck. Hanover 1821.

and insensible; he did not feel the prick of a needle, and was speechless and motionless. The usual means of restoring sensibility were tried without success. On examination, there was found a swelling over the squamous part of the left temporal bone, into which M. Wunsch wished to make an incision, to ascertain the state of the cranium; but this was opposed by the father. Eight leeches were then applied to the swelling, and fomentations; still without any change being produced in the state of the boy. The persuasions of the surgeons having no effect upon the father, the patient remained twelve days soporose, insensible, and unconscious;—he had, however, the power of swallowing liquids. On the twelfth day after the injury, the operation of trepan was commenced. On reaching the bone, there was observed a stellated fracture, with depression of the squamous part of the os temporis, of the form of the letter V, from which there proceeded two fissures through the os bregmatis,—one going to the lambdoidal, the other to the coronal suture. The pericranium of the depressed portion was torn and drawn into wrinkles. The trephine was applied to it, and the bone removed without any extravasation appearing; but on attempting to separate the dura-mater from the remaining depressed bone, there issued a quantity of black uncoagulated blood. This was carefully removed with a sponge; the depressed bone was raised into its place by the elevator, and the edges of the wound were simply brought together with a bit of plaster. During the operation, no sensibility in the patient was manifest, and his state remained unchanged. After two days, having received a dose of jalap and calomel, which opened his bowels, he became towards midnight very restless, tossed from one side to another, but neither moaned nor spoke. In the morning he slept till six o'clock, when he opened his eyes and called on his father. After this time he got better, not however without experiencing considerable fever, which required the use of the lancet. In seven weeks the wound had healed without any exfoliation, the depressed portion of the bone which had been raised remaining in its proper situation, and the opening made by the trepan so well closed, that on applying the fingers to the part, the pulsation of the brain could not be distinguished.

The recovery from the operation of trepan has been stated by Dr. Merrem * to be accelerated by replacing the osseous disc, separated by the trephine. To prove this, M. Walther, Professor of Medicine and Surgery, at Bonn, having, by a crucial incision, laid bare the left parietal bone of a dog, applied to it a small trephine. The teeth of the instrument, after perforating the bone, had torn the dura mater, and opened the ensiform sinus. On removing the disc of bone, hæmorrhage rapidly occurred, but it was checked by means of dry charpie pressed on the wound. The portion of bone which had been separated, after having remained on the table for five minutes, and being also deprived of its periosteum, was replaced in its former situation. It did not entirely fill the hole, a space of about half a line remaining free, between the circumference of the disc and the surrounding edge of the parietal opening. The flaps of integument were drawn over it, and retained by a suture. The animal had slight fever on the second day; on the third he regained his appetite. The edges of the scalp united by the first intention.

The dog remained healthy for a twelvemonth afterwards. After his death, the cranium presented the following appearances. The portion of bone which had been removed and replaced, was so completely united to the margin of the opening, that it was difficult to discover its limits in the dry and blanched cranium. The callus which produced the union, so closely resembled osseous substance, that it

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* Animadversiones quædam Chirurgicæ, Experimentis, in Animalibus factis. Giesse, 1810.

could not be distinguished from it. The re-united portion was of a more blanched and shining colour than the surrounding bone, so that its appearance afforded matter of doubt whether, after its union, it had preserved its vitality, or whether, having lost this principle, it had been retained by the callus formed from the edge of the parietal opening. In the case which follows, there can be no doubt of the replaced bone having preserved its vitality.

A labouring man, aged thirty six years, of a robust constitution, addicted to the use of spirituous liquors, was wounded on the head by a stone, which fell from a considerable height. The symptoms of concussion were moderate. He was blooded on the second day after the accident; on the sixth, he was so far recovered as to pursue his occupation. Pain of the head, which at first was slight, became so violent that he left off his employment, and had recourse to various medical men. Bleeding, blisters, and setons; cold applications to the head, purgatives and emetics were all prescribed without effect. He presented himself at the hospital at Landshut, begging for the operation of trepan, the pain being at that time excessive. The head having been shaved, M. Walther perceiving some protuberances over the right parietal bone, and conceiving he might find under it some organic lesion, applied the trephine, and removed the osseous disc. The dura matter was sound, as was also the internal surface of the vitreous table, and there was no exudation between the lamellæ of the bone. The periosteum was entirely removed from the disc, which, separated from the soft parts, had been laid upon the table. It was returned into the opening, and the flaps of integument were placed over it, and retained by adhesive plaster.

The patient bore the operation well. The febrile symptoms were moderate. The signs of inflammation of the dura mater were not severe, and were entirely local; but the flaps did not unite. Suppuration supervened, the discharge from which continued some months. The patient, however, got better; the pain of the head gradually diminishing, at last disappeared. At the bottom of the wound, the osseous disc could be felt free and moveable. Conceiving, at the end of the third month, that it ought to be removed, the professor seized it with the forceps, but instead of bringing away the entire piece of bone, only a very thin, angular, and ragged portion of the external table, came away. The surface of this portion was rough and unequal: one of its margins was round; the other pointed and serrated. In a word, the vitreous table of the separated disc, and part of the external lamella, were re-united, while the larger portion of the latter was exfoliated. On attentive examination of the bottom of the wound by the probe, the parietal opening was found thoroughly closed, and filled by osseous matter, hard and covered by healthy granulations.

As exfoliation and granulation, cannot take place unless from a part which possesses an active state of its vessels, so it becomes evident, that the re-united portion of bone, in this case, retained its vitality, formed vascular connexions with the dura mater and with the diploe, and became subject to the usual processes of nutrition and vascular action.

After the removal of the exfoliation, the suppuration gradually diminished, and in a short time the wound cicatrized in the usual manner.

*Case of Monstrous Birth.**

THIS infant was born in Val de Olivas, a town of Spain, and came into the world after a very tedious and difficult labour. It had on each hand six fingers; on the left foot six toes, and on the right seven. It lived three days, but never opened its eyes. The eyelids were separated with some force, when there was seen a transparent horny membrane, covered with a thick yellow skin, producing a sanguineopurulent discharge.

* Décadas Médico Quirúrgicas, Vol. iv. No. 6.

Case of an Extraordinary Number of Calculi in the Bladder. *

A MAN, sixty years of age, who had long suffered from dyspepsia, had, in 1804, the first attack of gout, and soon after, conjoined with it, some symptoms of gravel. These last he at first disregarded, but they gradually increased, until at length violent inflammation of the bladder supervened. He now applied for medical advice, and various remedies of a palliative and antiphlogistic kind were employed; and the return of the gout was solicited. At length alleviation of the symptoms was produced, and several calculi were passed by urine. The circumference of the swelling of the bladder was also diminished, and the progress of the inflammation checked; nevertheless, this severe malady did not cease. It assumed every day more and more the symptoms of chronic inflammation of the bladder, which, after thirty days of intolerable torment, ended in death.

ON DISSECTION, the coats of the bladder were found unusually thick, and there were discovered within it 398 calculi, of different forms, and from the size of a pea to that of a Spanish olive. This number of stones exceeds any that has yet been remarked. Three hundred have, however, been passed by urine by a female, as recorded by Tulpius in the Observ. Med. l. ii. c. 47.

By a chemical analysis of the stones, instituted by Professor Moyon, they were found to consist of phosphate of lime, phosphate of magnesia, and uric acid.

Suggestion respecting the possibility of destroying Cancer, by the application of intense Cold.

AN expediant has suggested itself to my mind, by which I think that the application of artificial cold to a diseased part might be rendered very manageable; that is, by employing masses or plates of metal, cooled down to the requisite degree in a frigorific mixture, and then applied, for a sufficient time, to the part upon which it might be wished to induce mortificaion. I suppose that this effect would certainly be induced, by the application of heat, after withdrawing the cold application.

Such metallic masses might be formed to any shape or size that might be wanted, and would have the advantage of limiting the application of the cold correctly to the surface intended.

The section of Van Swieten, which I mentioned to you to-day, upon the subject of cancer, is 449. His speculation about curing the diseases, by inducing mortification, commences with the words, "Sed an non possit totus cancer emori?" or, in the translation, "But is it not possible for a cancer to mortify?" and is continued to the end of that paragraph. The view he takes of the subject seems most sound and rational; and it appears to me, that we possess an agent in artificial cold sufficiently powerful to execute his views. Having barely suggested the idea, I shall content myself with recommending it to your mature deliberation.

It would seem to correspond pretty correctly to what Van Swieten was in quest of; but in deep-seated diseases, where the preservation of skin by the knife so much contributes to the cure, it would seem to be less suitable. In more superficial affections, or in prominent tumours, especially those with circumscribed necks or bases, it may have fewer disadvantages.—*Philadelphia Journal*, No. 6. Feb. 1822.

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* Magazin der Auslaendischen Literatur. Hamburg. Jan. Feb. 1822.

Abstract of the account of a Case of Adhesion of the Labia Pudendi in a Negro obstructing Delivery, by William Russell, of Jamaica.

MR. THOMAS GEOGHAGEN had, amongst his negroes in Jamaica, a woman named Avis, about 27 years of age, of the Eboe nation, who, on declaring herself in an advanced stage of pregnancy, asserted at the same time that she could not be delivered, as there was no external passage, and therefore expected that she should die in consequence. There was found, on examination, to be a cicatrix extending from the mons Veneris to within an inch of the anus, where there existed a small orifice barely sufficient for the introduction of a small female catheter, through which orifice the urine and menses exuded. This cicatrix appeared to have been the consequence of an operation which had been performed upon her in her native country when a child, and which she said was commonly practised with the female offspring of families of rank, as a security against improper connexions. The adhesion being removed by an incision with a sharp-pointed bistoury, the delivery was easily accomplished, and future adhesion prevented by interposing a bougie till the wound of the labia on each side had healed.—*Philadelphia Journal* No. 6. Feb. 1822.

Annals of Name-coining and Medical Style.—No. II.

We have put down, in the course of our medical reading for the last few weeks, the following list of outré and novel words:—

Ophthalmiatric	Opiologia	Embryogeny
Oculism	Opioiatrike	Colatitious
Oculistic	Loimologia	Nauseabund
Spectaculation	Anthropopathical	Imblend
Caphopicrite	Bromology	Œsophageal
Degenerescence	Disorganizative	Rheumatismal
Obstetricate	Chimiatry	Granulative
Dementated	Clematology	Climatorial
Surdity	Gymnicology	Intertropical
Cophosis	Perflation	Senescence.

The new proprietors of Vauxhall Gardens have, we observe, caught the mania of word-making, and have been consulting their Greek lexicons; though we hope they may not fall upon so unpropitious a combination as Terence's Heautontimoroumenos.

We give the following as an instance of sentence-making, in which the author seems to have a wish to make incomprehensible figures pass for ideas. "The same constitution of mind which favours implicit belief, facilitates also the influence of doubt. Those optics which are most easily dazzled by exterior splendour and artificial colouring, are, by this process, [*what process?*] blinded to the interior and essential, when the exterior and adventitious [*what?*] is removed. The curtain is drawn, [*by whom?*] and all behind is blank. The awfully obscure of medicine is abrogated, [*how and by whom?*] and therefore medicine itself is a mere trick."

Critical Characteristics of New Books.

I.—*A Natural Arrangement of British Plants, according to their relations to each other, as pointed out by Jussieu, De Candolle, Brown, &c. including those cultivated for use; with an Introduction to Botany, in which the terms newly introduced are explained; illustrated by figures. By Samuel Frederick Gray, Lecturer on Botany, Materia Medica, and Pharmaceutic Chemistry.* 2 vols. 8vo. Pp. 824 and 757. London, 1822. Price 2*l*, 2*s*.

This is a very laboured compilation, but it does not appear for what class of readers it is intended. The minute and often trifling details in the introductory part would lead us to believe that it was intended as a text-book for junior students; but the method and arrangement followed in the work itself, and, above all, its high price, would suggest that the author intended to appear as a very scientific botanist, though we scarcely think that any of our amateurs will thank Mr. Gray for his elementary instructions. For example:

"Tendril-bearing, *cirriferus*. Bearing tendrils."
"Tendril-like, *cirriformis*. Twining like a tendril."
"Thorned, *spinescens*. Ending in a thorn."
"Three-fingered, *tridigitata*."
"Four-fingered, *quadridigitata*."
"Five-fingered, *quinque-digitata*."
"Seven-fingered, *septemdigitata*."
"Hanging, *penduli*. Falling below its origin perpendicularly towards the earth."

We could easily give a thousand examples of the same kind, which can be of no use to any boy who has mastered his accidence, much less to students of botany. It is the multiplicity of these trifling details which has not only swelled the book to so goodly a bulk, but which must make the rudiments of the science appear so formidable, that few, we predict, who look into it will be inclined to go beyond the two first divisions of his introduction.

If the student proceed to the body of the work, he will be puzzled at the very commencement with a long definition of plants, which is unique in its kind, as a specimen of scientific style—(see i. pp. 275, 276.) The plants themselves follow according to the involved and unnatural system of Jussieu, which does very well for amateurs to differ about, but must always be to a mere student utterly incomprehensible.

In the descriptions of the individual plants, we observed several deficiencies and inaccuracies, at which we were rather surprised. No habitat of any plant, for example, is given, and the common plants are not distinguished from the rare ones, though this would have been certainly as useful as loading the pages with so many synonimes and references, often filling from twenty to fifty lines in a page. In some instances, indeed, we found these indispensable in comprehending what the author meant, as he seems to have been much more anxious to give all the most novel or most unknown names, than to keep to the usual beaten path. For example, he adopts from Haworth the new genus Robertsonia, divided from Saxifraga, of which he describes no fewer than six species, three of which are also from Haworth. Now, we will venture to say, that, with some care in diversifying the soil, Mr. Gray may raise all the six from the seed of any one of them. We have the authority of

Mr. Drummond for saying that he has observed them all passing into each other, by insensible gradations, from the common none-so-pretty to the smooth, the hairy, the saw-leafed, the tooth-leafed, and the kidney-leafed. The Hookeria lætevirens, we are told, grows "on bogs;" but where Mr. Gray learned this, we know not. We have gathered it, in its only known habitat, in the course of a small stream in a wood. Gymnostomum conicum is said to grow "in fields;" it ought to be "cultivated grounds."

We cannot spare room to be more particular; but, upon the whole, though there has been prodigious research and labour spent upon the work, we think it a complete failure, both as a text-book and as a cabinet book. Those who wish to begin the study, we should recommend to get the Flora Britannica, or the Compendium of it, with Smith's Introduction, (not his Grammar,) or the work of Withering, with any of the smaller publications of Salisbury, &c. Mr. Gray's work would only frighten them from the science, by making it appear formidable and incomprehensible.

We are very sorry to have all this to say of a work from the author of the very useful Supplement to the Pharmacopœas, which is now as indispensable an appendage of the apothecary's shop as the Dispensatory itself. No apothecary, indeed, can do without Mr. Gray's work, and we think it little less important to the surgeon and the physician. The analyses of patent and quack medicines, and the receipes for perfumes, &c. are both very curious and useful. Almost the only fault which it has, is its frequent encroachments upon the Pharmacopœias and the Dispensatories, which, like a similar method in the work before us, has increased the size and price of the book, while it has diminished its real value. Mr. Gray would do well to throw out a third of the matter from his Supplement in his next edition.

II.—*Cases illustrative of the Diseases of the Ear, &c. By J. H. Curtis, Esq. &c.* Pp. 93. 8vo. London, 1822.

Those who are acquainted with Mr. Curtis's former book will be at no loss to know the character of this one, which is a series of cases treated upon Mr. Abernethy's plan, of attending to digestion in the first place, and to local means in the second. Mr. Curtis, of course, was successful in all his trials, which are here published. Perhaps it is prudent to be sparing in the publication of unsuccessful cases.

III.—*Remarks on Cutaneous Diseases. By J. H. Wilkinson.* Pp. 87. 8vo. London.

The author justly considers this subject to be still very imperfectly understood, though he is "perfectly satisfied with what has been already written concerning its anatomy and physiology." He has an aversion to cases, and therefore has given very few, contrary to the practice of some authors, who "have, or ought to have, the power of filling a few pages with their own observations and reflections," but who fill their books with cases and quotations, in order "to gain a little notoriety, by having their names as often as possible before the eye of the public." The author, from this, seems to feel a little sore at the notoriety of some quoting and case-giving authors. What was our surprise, after this preface, to find this *brochure* of 87 pages literally overflowing with cases, by whole families at a time! We doubt not indeed, though we did not take the trouble to reckon, that there is a case for every page of the book. He is perfectly satisfied with Dr. Willan's descriptions and classification, but objects to his incessant quotations of Greek, Latin, and German, and to his want of success in pointing out remedies. Mr. Wilkinson, who is an old practitioner, gives, however, many useful remarks on remedies, intermixed with such singularities as we have mentioned. He says, for instance, that he is happy to declare that he has never lost a patient for seventeen years, in erysipelas,

rubeola, scarlatina, urticaria, roseola, or erythema, by employing Dr. Pearth's formula—

R. Ammon. subcarb.
Plumbi superacetat. aa ʒj.
Aquæ rosæ Oj. M.

IV. *A Dictionary of Practical Surgery, comprehending all the most recent improvements from the earliest times down to the present period, &c. By Samuel Cooper, formerly Surgeon to the Forces, &c. &c. Fourth edition, with many corrections and additions.* Pp. 1226. London, 1822. Price 27*s*.

WE had in preparation an elaborate review of the additions to this useful and well-known work; but upon hearing that the demand for the new edition was considerable, we deemed it almost superfluous to make an abstract of what must be in the hands of so many of our readers. The additions are very extensive, there being above a hundred additional pages, independent of what has been left out of the old matter, and, so far as we have examined the newer portions, seem equally valuable with the former. The articles relating to the surgery of the eye,—or *Ophthalmology*, as it is barbarously called,—struck us as being particularly laboured; some of them appear to have been entirely re-written, or at least materially altered and enlarged. It is to be regretted, however, that Mr. Cooper or his publishers can find no other way of furnishing the purchasers of the former editions with the new improvements, than by publishing an augmented edition of the whole work. Would it not be both more lucrative to them, and to former purchasers more accommodating, to republish the work verbatim, with a supplement, to be sold separately?

We need not recommend a book so well known and so highly appreciated.

V.—*The Philosophy of Zoology, or a General View of the Structure, Functions, and Classification of Animals. By John Fleming*, D.D. &c. 2 vol. 8vo. With Plates. Edinburgh, 1822. Price 30*s*.

DR. FLEMING is well known as a respectable naturalist, particularly by some able papers in the Edinburgh Encyclopædia and the Wernerian Transactions. The present work, which has been announced these several years, will, in all probability, determine the rank which he will hereafter maintain as a philosopher. The design, indeed, seems to be excellent, though he has attempted a few innovations, with which we are not quite pleased. Upon the whole, however, it is a very superior work, and is almost the only one of the kind which we could recommend to the professional reader, there are so many interesting details of physiology, which are so preposterously omitted in the common works. We shall take an early opportunity to make a more extended critique upon it, while in the mean time, we strongly recommend it to our readers.

VI.—*The London Dispensatory; being a Practical Synopsis of Materia Medica, Pharmacy, and Therapeutics: illustrated by many useful Tables, &c. &c. By A. T. Thomson, F. L. S. &c.* 3d edition. Pp. 962. London.

WE merely announce this work to say that this edition is in every respect worthy of the author, who is too well known to be affected either by our praise or our censure. He has very briefly noticed some of the novelties now or lately in fashion, such as Prussic acid, Colchicum, Iodine, Croton oil, &c. &c. The botanical part of the book is more ample, and we believe more accurate, than in any similar work

VII.—*Practical Rules for the Restoration and Preservation of Health, and the best means for invigorating and prolonging Life. By George Cheyne*, M.D.F.R.S. &c. 12mo. London.

We are happy to see this useful little work reprinted in so cheap and neat a volume. The study of such subjects as diet, clothing, and exercise, are but too little attended to among the profession. Those who wish for a clear, philosophical, and brief view of this important branch of medical knowledge, cannot have a better guide than Dr. Cheyne.

VIII.—*An Inquiry into the Comparative Forces of the Extensor and Flexor Muscles connected with the Joints of the Human Body. By Julius Jeffreys, M.R.C.S. &c.* Pp. 51. 8vo, London, 1821.

This essay seems to be rather ingenious, and, in so far as the anatomical and mechanical reasoning is concerned, it manifests very praise-worthy talents in so young a man as we understand Mr. Jeffreys to be. He has also, as we have heard, received some very high compliments on the merits of his first production, from the highest names in the profession; such as Sir Astley Cooper, Mr. Travers, &c. The book is, in fact, a criticism on Richerand's assertion that the flexor muscles are in general stronger than the extensors, which he proves from the position of the limbs during sleep—*when the will ceases to act.* We disagree in this point, both with Richerand and Mr. Jeffreys; for it is not the fact that the will ceases to act during sleep. If it were so, it would be impossible to awake anybody who was asleep. We would ask them why we often toss and turn during sleep if the will does not influence our members to remove us from an uneasy posture? We know that it is one of the dogmas usually taught in metaphysical books, in Stewart on the Human Mind, for example, that the will sleeps. It is not, however, on that account, the more likely to be correct, but the contrary, for such works contain more hypothesis than fact, and ought never to be trusted to. We refer Mr. Jeffreys, for accurate illustrations of this subject, to Cabanis' Rapports Phys. et Morales.

IX.—*The Nursery Guide; or "Remarks on the Conduct of a Nursery," containing Information likely to be useful to those who may shortly take upon themselves the Duties of a Mother, and particularly offered to the notice of the Females in general. By Henry Thompson, Surgeon, Enfield, Middlesex.* Pp. 56. 8vo. With a blue plate. London, 1821.

The blue baby in the frontispiece of this curious production made us imagine, at first glance, that we were to be treated with a dissertation on the blue disease, or morbus cæruleus, (*See page* 379, *above*,) but upon looking further, we discovered that the blue baby was not even alluded to in the book. What business it has in the frontispiece we cannot divine, except it be a personification of Mr. Thomson's Muse; for the book is writteu in a sort of hobbling prosaic blank verse, with notes in poetic prose. It was to have been dedicated to the Princess Charlotte; but while the author was writing the word dedication, his hand was arrested by her death-knell, and he has therefore printed the word Dedica..... as a piece of wit.

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OF
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Nº XVI. OCTOBER, 1822. Vol. IV.

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Foreign Review.

M. M. Mayer, and Kummer, on Polypus and Steatome of the Uterus.*

In a former number we gave an analysis of Mr. Clarke's excellent work on the diseases of females, attended by discharges. We believe that an accurate knowledge of the symptoms and treatment of female diseases in general is of great importance to every practitioner, and a very much neglected part of the education of our students. For this reason we think that we shall perform an acceptable service to many of our readers in presenting them with a comprehensive account of some untractable diseases of the uterus, beginning with uterine polypus, its peculiar and diagnostic symptoms, with comparative observations on the different modes of treatment recommended for its relief. The treatise before us is the production of M. Mayer, Assistant to the Lying-in Hospital in the University of Berlin. It is dedicated to the celebrated Siebold, Professor of Midwifery and Director of the Hospital, and may be considered as containing his opinions and the results of his experience.

We have neither space nor inclination for following M. Mayer in his conjectural history of the disease from Hippocrates, Celsus,

* De Polypis Uteri Commentatio Medico-Chirurgica. Auctore C. G. Mayer, M. et C.D. Cum Tab. Aen. 4to. pp. 56. Berolini, 1821.

De Uteri Steatomate annotationes quædam insignis ejusmodi tumoris observatione illustratæ. Auctore Georgio Frederico Kummer. Lipsiæ, 1819.

and Aritæus, down to Ruysch and Levret, since whose time there has been but little new added to the history or treatment.

Uterine Polypi vary very much in their STRUCTURE. They may be soft, spongy, cellular; or hard with a solid, compact, cheesy or cartilaginous texture: they sometimes include a cavity containing a mucous or lymphatic fluid. Polypi differ from sarcoma and steatoma of the uterus, which are met with in the substance or on the external surface of that organ. Polypi on the contrary appear to originate under the mucous membrane, from coagulating lymph effused by the minute vessels, and gradually increasing from its accumulation, and are still covered by that membrane. When examined by the finger they present the same smooth surface as the uterus, excepting in those cases in which the polypus has reached a very large size, their surface being then often rough and irregular from distention. There are very different opinions as to the vascularity of polypi. Levret, Astruc, Pallas and others, assert that they have felt the pulsations of arteries in them whilst applying the ligature, &c. and have even discovered these vessels after the disease has been extirpated. On the other hand Stork *(Annals of Midwifery and diseases of Women and Children)* who has tied many polypi, never observed this pulsation, nor was able to detect vessels in the neck or body of the tumour. Laumonier, Roux, Heing, Siebold, and our author, coincide in this opinion. The latter suggests, not very probably, that operators may have mistaken the pulsation in their own fingers, for one occurring in the tumour. He concludes that vessels have rarely if ever, been felt in them during life; and that it is very doubtful if ever they have been discovered after the removal of the tumour. Hence it is very desirable that this subject, of much importance in the treatment, should be investigated, particularly by dissection of the injected uterus when the polypus has not been removed.

When the uterus is distended by the formation and increase of a polypus, the SYMPTOMS of various disorders in its functions shew that it suffers from the presence of a foreign body. Sometimes the catamenia disappear, and other marks of pregnancy are present, such as nausea, vomiting, and enlargement of the breasts. More frequently irregular menstruation occurs, particularly an excess at the customary periods. By degrees the uterus, and sometimes even the abdomen is distended; the cervical portion of the uterus is shortened, and becomes thick and tumid, but instead of the softening peculiar to pregnancy it remains hard. Sensations of weight about the genitals, and of bearing down are also present; frequently the bowels are constipated, and there is difficulty in passing urine. The os uteri

is dilated sooner or later according as the polypus is attached to the fundus or cervix; so that when fixed to the cervix it generally protrudes when it has attained the size of a finger, but on the contrary when arising from the fundus may remain in the uterus several years, and attain the size of a child's head before it protrudes through its orifice. The dilatation of the os uteri is mostly attended by a discharge of mucus mixed with blood, or resembling the washings of flesh mixed with membranous shreds; or by hemorrhage so profuse as to threaten death. Generally the polypus descends gradually from the uterus into the vagina, but sometimes by exertions in leaping, falling, or evacuating the bowels, it protrudes suddenly, the danger in such cases being often increased by an inversion of the uterus. The polypus having entered the vagina increases more rapidly, and frequently attains an immense size, filling the whole of the lower part of the pelvis, and even projecting from the pudendum. The constipation and difficulty in making water increase, and much inconvenience is often caused by retention of urine. The patient becomes exhausted and emaciated by the profuse flow of mucous discharges resembling the lochia in smell; by the hemorrhages which frequently occur; and by the severe and increased pain. Hectic fever and anasarca appear, and if not timely relieved the patient perishes of consumption or dropsy.

Such is the progress of polypus arising from the *fundus* uteri; when it springs from the CERVIX, the symptoms dependent on its exclusion from the uterus are absent; the hemorrhages are less profuse; the mucous discharges on the contrary more so; and prolapsus is a more frequent attendant on the increase of the polypus than inversion of the uterus.

There are a few instances recorded of polypi perishing from defective nutrition, and recovery following their expulsion from the uterus when in a putrid state, without the assistance of art. As a necessary consequence of his opinions on the vascularity of polypi, M. Mayer doubts the possibility of the occurrence of inflammation, ulceration and sphacelation in these productions, as asserted by Levret and John Burns. Polypus does not prevent conception; it is not unfrequently met with in the gravid uterus; most commonly it produces abortion; but Levret, Bach, and Jörg, have recorded cases in which the fœtus reached its full term. In Bach's case (STARK's *Archiv.*) the placenta was attached to the polypus.

Although the symptoms above-mentioned may give rise to a suspicion of the existence of a polypus, an examination is necessary to render the DIAGNOSIS perfect. But this can only be useful when the os uteri is so far dilated as to admit the finger.

When this is the case a portion of a round, smooth, insensible tumour may be felt in the opening. The diagnosis becomes much more certain if the polypus has escaped from the uterus, or if it is attached to the cervix. In such cases, a round, insensible tumour, of variable size, may be felt in the vagina, as well as the pedicle by which it is attached to the uterus. Unless the polypus has partly escaped from the uterus, it will be found surrounded by the tumid lips of its orifice; but by a little effort the finger may be passed through the os uteri and reach the point to which the polypus is fixed. When the surface of the polypus is rough and irregular in the manner already mentioned, the depressions upon it may sometimes be mistaken for the os uteri. During pregnancy a polypus could not be recognized, unless it were attached to the os uteri: after delivery it either protrudes, or betrays itself by an excessive lochial discharge, and from the relaxed state of the parts is easily discovered.

Among the diseases that may be mistaken for polypus, we may mention the muco-sanguineous discharges peculiar to polypus, with hemorrhage frequently occurring, have often been the cause that this disease has been mistaken and treated as a simple ABERRATION of the CATAMENIA, such as often occurs from repeated abortions, and about the period when the menses finally cease. In such cases all doubts may be removed by examination, "without which," says M. Mayer, "we should not undertake the treatment of any female diseases, whenever there is any reason for suspecting a topical affection of the genitals." The manner and progress of the discharges may afford us some information as to whether we are to treat a case of polypus or of menorrhagia; in the former there is a constant discharge of mucus tinged with blood, and the hemorrhage occurs at very irregular and uncertain periods; in the latter an attentive examination will always shew that the flux of blood has a fixed and certain type; thus, probably, the menstrual discharge recurs at intervals of one or two weeks; or, taking place at more distant periods, it continues for an unusual time; and the leucorrhœa preceding or following the hemorrhage, is not, as in polypus, mixed with blood, or with the peculiar membranous shreds.

M. Mayer thinks that the general ill-success of the treatment of LEUCORRHŒA, depends particularly on want of attention to its occasional causes, and on the neglect of examination per vaginam. Syphilis, rheumatism, gout, and other constitutional affections may produce this symptom, which also arrises from local diseases of the genitals, particularly from polypus attached to the cervix uteri, much more frequently than might be supposed. It is evident that if the author's recommenda-

tion of making an examination before commencing the treatment be followed, the presence or absence of a polypus must be at once ascertained.

Moles differ from polypi principally in the circumstance that they are connected with the uterus in their whole circumference, but only by agglutination, whilst polypi are attached to its surface by a pedicle, and are covered by its internal membrane, which is not the case with moles. True moles are derived from conception, with a morbid change of the ovum; spurious ones from a retained fragment of placenta, a clot of blood, &c.; they become organized, are attached to the uterus by a deciduum, increase rapidly, and after some months are expelled, with hemorrhage, from the uterus, like the premature fœtus. A mole of whatever kind it be, irritates the uterus, stops the catamenia, and causes all the symptoms common to pregnancy and to incipient polypus. The signs of these three different states are in the beginning so obscure and confused, that few will be found able to discriminate between them. In time, a mole may be distinguished by the following circumstances. It increases and expands the abdomen more rapidly than a polypus; the cervical portion of the uterus is shortened, softened and rendered tumid in a shorter time; hence this affection is more likely to be mistaken for pregnancy: the os uteri remains closed until the time of expulsion, when the mole is forced into the vagina, not gradually as in polypus, but suddenly, with pains and symptoms resembling those of abortion; the discharges which attend on polypus are also wanting.

Fungous Excrescences, which are well described by Levret, Herbiniaux, Clarke (*see our* No. xiii.), and Wenzel (*Krankheiten des Uterus, Mainz,* 1816.), arise from the internal surface, or from the cervix of the diseased indurated, or scirrhous uterus. They are spongy, luxuriant excrescences, soft to the touch, not painful, discharging copiously blood, or bloody water; they are of two kinds; the one least common is solid, and consists of a soft globular mass; the other multifidous (les vivaces digitales of Levret), consists of several soft tubercles of variable size, heaped together: they arise within the cavity of the uterus, hang from, and are closely embraced by its orifice; a part is frequently thrown off, or may easily be detached by the fingers, but without any advantage to the patient, the separated parts (according to Levret, Denman, and Wenzel,) being speedily replaced by new productions. Death is usually caused by the profuse discharges, unless the accompanying scirrhus should terminate in fatal carcinoma. These excrescences may be readily distinguished from polypus, by their spongy softness,

by their irregular form, by the copious discharge of blood when touched, and by the symptoms of the enlarged, indurated, scirrhous and painful uterus.

Carcinomatous and SCIRRHOUS excrescences distinguished by hard, unequal and projecting tubercles, sometimes arise from the surface of an ulcer, like portions of the head of a cauliflower, which may mostly be separated by the finger. The symptoms of carcinoma, particularly the peculiar fœtor of the ichorous bloody discharge, distinguish this affection alike from fungous excrescences and from polypus. Scirrhous tumours sometimes appear to arise from the cervix uteri, which are in fact formed by the increase of one of the lips of the orifice, presenting a round, hard, irregular and painful tumour, with the peculiar structure of Scirrhus. This form of the disease, generally ends in cancerous ulceration, and is distinguished from polypus by the symptoms of scirrhus or cancer which are present.

Cases are not rare in which unskilful and imprudent practitioners have mistaken an INVERTED UTERUS for a polypus, and proceeded to remove it by the ligature or the knife; nor are instances wanting in which the most dexterous and skilful have hesitated or even erred in their diagnosis: of such a nature was the case in which Petit (*Actes de la Societé de Santé de Lyons*), with four others, treated an inversion as a polypus, and failed to recognize the disease during life: such also was the case more recently recorded by Hauk. (*Rust's Magazin f. d. gesammte Heilkunde. Berlin*, 1818.)

Inversion of the uterus is either complete or incomplete. In the first, the fundus uteri is protruded through the orifice, and appears projecting from the vagina; in the second the fundus descends into the vagina, or only approaches to the orifice of the uterus. It is of importance to remark, that except from the descent of a large polypus into the vagina, inversion of the uterus occurs only in those who have been recently delivered, and is for the most part the result of a very rapid delivery, or of injudicious assistance, particularly force applied to the umbilical cord before the separation of the placenta. The symptoms of complete inversion are a red, fleshy tumour, as large as a fist or a child's head, protruding from the genitals, with violent pains and profuse hemorrhage often causing syncope, convulsions and death. The uterus may be felt rough, elastic and painful; the uterine tumour ordinarily felt above the pubis is wanting; the inversion, though with difficulty, may be returned: on the other hand a polypus is insensible, hard and smooth; it may with considerable pain be returned into the vagina, but is immediately expelled again. In the inverted uterus the mouths of the bleeding ves-

sels, and the placenta or place of its insertion may be seen. It is to be remarked, however, that in one case already alluded to, the placenta was found attached to the polypus. In the case of inverted uterus, the finger or probe cannot, as in polypus, be passed through the vagina into its cavity.

The incomplete inversion is either recent or inveterate. When recent it is attended by almost the same symptoms as the complete species, and may be distinguished in nearly the same manner. This kind of inversion is not very likely to be confounded with polypus, but as its symptoms are less serious than those of the complete kind, the disease may be mistaken by an inattentive observer; the hemorrhage may be subdued, the copious lochial discharge and severe pain, ascribed to other causes, and diminished by appropriate remedies; but the cause remaining, the disease becomes chronic and incurable: the inverted fundus remains in its unnatural position, or gradually falls still lower; it does not admit of being replaced, and thus constitutes another species of incomplete inversion. This form of disease bears a striking resemblance to polypus. The patient in one or other disease complains of a feeling of pressure and tension in the genitals, of obstruction in passing fœces and urine, of debilitating discharges of blood and serum from the genitals, and becomes gradually emaciated and chlorotic.

Under Professor Siebold, M. Mayer has had several opportunities of observing this *rare inversion*, and gives the following as the symptoms by which we may establish a DIAGNOSIS between it and *polypus*.

Polypus not unfrequently occurs in women who are barren; inversion in those who have borne children.

The symptoms of the polypus commencing with aberration of the menses, and frequently with their suppression, increase constantly, and are accompanied by pains like those of labour, at the time that the tumour is gradually forced into the vagina: the symptoms of inversion date their origin from the time of delivery; menorrhagia, unusually violent pains, and excess of the lochia in quantity and duration, succeeding to a very rapid labour, or to the rough and violent extraction of the placenta.

In polypus, a discharge of mucous fluids mixed with blood and membranous fragments is always present, occasionally alternating with copious hemorrhage: in inversion there is in fact an excess of the menses; the hemorrhage appears every second or third week, is very copious for some days, and is succeeded by a serous, lymphatic discharge, as clear as the purest spring water.

In polypus, examination discovers a round, firm and smooth tumour, sometimes villous, projecting into the vagina, and sur-

rounded by the orifice of the uterus; and the finger or the probe may be passed beyond the tumour into the cavity of the uterus. Inversion presents a similar round, smooth and firm tumour, often a little smaller at its upper part, and surrounded by the orifice of the uterus; but the finger or the probe when passed beyond the tumour in the vagina, meets with nothing like the cavity of the uterus, but strikes immediately against its parietes.

A polypus is altogether insensible: an inverted uterus may be rendered so insensible by astringent applications, &c. that it may be compressed or pulled by forceps without causing any pain to the patient, but still remains susceptible of sensation when gently scratched by the nail.

The ligature or scissars applied to a polypus excite no more pain than what arises from the dilatation and irritation of the vagina. As soon as the upper part of an inverted uterus, which often resembles the pedicle of a polypus, is compressed by a ligature, or divided by the scissars, most acute pain, and frequently even convulsions occur.

A depression or foramen is sometimes met with in the inferior part of a polypus, which has long lain in the vagina, and gives a certain degree of resemblance to a PROLAPSED UTERUS. Instances are recorded in which a polypus presenting this appearance has been extirpated under the idea it was the uterus. But examination and attention to symptoms will always show the difference: the prolapsed uterus is generally smaller at its lower part, and larger at the upper; the upper part of the polypus on the contrary is small and surrounded by the os uteri: besides this, if a polypus presenting a depression or foramen on its lower part should arise from the cervix, the true orifice of the uterus may be felt in the vagina near the pedicle of the polypus, and the real nature of the case thus made manifest.

Although RETROVERSION and ANTEVERSION of the uterus cannot readily be confounded with polypus, yet from the similarity of some of their symptoms it is necessary to say a few words on them. Retroversion occurs either in the unimpregnated or the gravid uterus; particularly in the third month of pregnancy. The symptoms are feelings of weight and pain in the genitals, with constipation and retention of urine. In a more advanced stage of the disease, arising either from pregnancy or morbid enlargement of the uterus, the fundus is pressed lower and remains wedged in the hollow of the pelvis; a round, smooth and firm tumour is felt in the vagina; the cervical portion of the uterus is shortened, tumid, and (which distinguishes the disease from polypus), is turned either directly to the sym-

physis, or to the horizontal ramus of the bones of the pubes. The peculiar muco-sanguineous discharges which attend polypus are wanting in retroversion.

The same circumstances attend the much rarer case of anti-version, with this exception, that the cervical portion of the uterus is directed towards the sacrum.

The author describes the FORMATION of polypi to the morbid action of the minute vessels which secrete the menstrual blood from the surface of the uterus, and to an aberration of the peculiar nisus formations which is more active in the uterus than in any other part of the animal frame. This aberration seems independent of age and circumstances, and to depend on a propensity of some particular uteri to these formations, like that in the skin of some individuals to produce warts, &c. He however allows that morbid congestions in the genitals, preternatural irritations, onanism, venus nimia, &c. may be considered as remote causes.

A polypus, whilst small and included within the uterus, produces little inconvenience, can scarcely be distinguished, and if suspected could not be removed. When increased in size, and expanding the os uteri, it causes considerable danger, and may even produce death from debilitating hemorrhages, and in this state it is removed with difficulty. When it has passed through the os uteri into the vagina, it may be removed more readily in proportion as its pedicle is thinner, and as its insertion is nearer to the cervix. If the disease has been of long duration; if the patient be advanced in life, and much exhausted by continued hemorrhages; if hectic has distinctly formed; if dropsy, lues, or any constitutional affection exist, the prognosis is doubtful, even after extirpation. Polypus does not prevent conception, but usually produces abortion: when extirpated, it is frequently reproduced; when attached to the orifice of the uterus, the symptoms are less severe, and the prognosis more favourable.

As to the TREATMENT of polypus all the symptoms depending on the disease speedily and safely disappear on its removal; but as this cannot be effected until the os uteri is sufficiently dilated to admit of ligature or excision, many and serious symptoms require attention and relief; the principal are hemorrhage, retention of urine and constipation.

Hemorrhage is to be treated by the usual means; perfect repose of body and mind; the supine posture; opium in small doses; mineral acids, particularly the phosphoric; alum, &c.; and cold injections of vinegar, &c. If these means should prove inadequate to restrain the hemorrhage until the dilatation of the os uteri, and if this symptom should endanger the patient's life,

then, and then only, it is allowable to dilate the os uteri by artificial means, for the purpose of immediately removing the polypus. Of the treatment of retention of urine and constipation it is unnecessary to speak.

The means which have been proposed for the removal of polypi are, detorsion and evulsion, cautery, actual and potential, ligature and excision. The two last are the only measures which the nature and situation of the disease will with propriety admit, and to these we shall confine our attention.

Both these operations when required should be performed, if possible, a short time after the menstrual period, or after hemorrhage; the genitals being then lax, and the flow of blood to them, diminished. The ligature of a polypus is an easy operation if the tumour protrudes from the genitals, and if the pedicle can be readily seen or touched, which however is uncommon, and can scarcely happen without inversion or prolapsus of the uterus. In such a case it is only necessary to apply with the hand a ligature firmly round the pedicle. But if the polypus be still included within the vagina and uterus, a peculiar instrument is required to carry the ligature up to, and fix it round the neck of the tumour. Levret was the first who invented an instrument of this kind, and since his time M. Mayer enumerates upwards of twenty celebrated men who have endeavoured to render it more perfect. All of these instruments consist of tubes for the passage of the ligature, some straight, some curved; some double, some single; most of them left in the vagina until the separation of the polypus, but a few so constructed as to admit of being removed, leaving the ligature round the pedicle.

They all have the inconvenience, that they cause considerable pain to the patient, and are of difficult application: this depends partly on the various seat and size of the polypus, partly on the narrowness, curvature and lubricity of the vagina and external parts; but above all, because the fingers alone can be employed to the exclusion of the eyes. Of all the instruments which have been recommended, the author prefers that of Ribkius slightly modified, and of which it would be hardly possible to convey a perfect idea without the assistance of the engraving he has given. The principle of it is, that the double canula, shaped like a Roman S, may be removed when the ligature is carried round the polypus, the thread being tightened by means of a row of ivory beads, through which both ends of it pass, and extending from the pedicle of the polypus to an iron winch, or windlass, producing the necessary degree of constriction.

The ligature is particularly proper in two cases;—1st, If an

artery be felt pulsating in the neck of the polypus; and 2dly, if this neck be so thick as to render it probable that it contains large vessels.

Excepting these cases, the author gives a decided preference to excision for the cure of polypus, and refers to the successful practice of Professor Siebold and others, for the proofs of its superiority. The instrument employed by the Professor is a pair of scissars, curved like a Roman S, both in the blades and handles, with round points, and from 9 to 10½ Paris inches in length. It is unnecessary to describe the mode of employing them, except to observe that the pedicle is to be cut through not at once, but by repeated strokes. The scissars should be well made, to obviate any unnecessary pressure. After the operation, particularly if the uterus is much enlarged, diluted vinegar, &c. may be injected. If hemorrhage should occur, though experience gives no cause to fear it, it is to be checked by cold styptic injections.

Slight symptoms of inflammation may occur, after ligature or excision, from pressure on the genitals, the effects of the operation, &c. and are to be checked by rest, abstinence, and the antiphlogistic treatment. Suppuration and discharges after either operation are to be treated by tepid, soothing injection, and the tone of the parts is to be restored by gentle astringents and stimulants.

The grounds of the preference which the author has given to excision, are the greater difficulty of applying a ligature, even by the most dexterous and skilful operators; the greater severity of the symptoms following ligature, particularly stranguary, and the horribly fœtid discharge, which though not dangerous, causes much pain and inconvenience; the greater time required for the separation of the tumour by ligature, namely, from four to fourteen days, and not immediately as by excision. Among the advantages of excision is, that it may be performed without exposure, an object of much importance to the patient. Even in those cases requiring the ligature, the polypus may be cut off below the tied point, and the putrid, offensive discharges in a great measure obviated.

We see but one objection to excision, and that is the risk of hemorrhage, for it is by no means proved, as the author would have us believe, that polypi are not organised. This is still a doubtful point, and must be determined by future experience. It is evident, indeed, that one reason which has induced the author to take up this opinion, is his predilection for a peculiar mode of operation. This predilection has been the means of

leading him into some inconsistencies of no great importance and very excusable.

This very ingenious treatise terminates with the histories of six cases in which the polypus was successfully removed by Siebold and the author, with the assistance of the scissars of the former.

The juvenile performance of M. Kummer affords a splendid specimen of what may be expected from the author at some future period. The womb, he very justly observes, is an organ of great importance in a medical point of view; and there is still room for a scientific work which should treat fully of its diseases, distinguish them accurately, and indicate a proper method of cure; a work, however, by no means of easy execution, on account of the natural reserve and modesty of females.

According to its etymology, STEATOMA signifies a fatty tumour, and is a name not altogether applicable to the disease which it generally indicates, but as it is a name in common use, M. Kummer has preferred it to a new one. He defines a steatome to be an encysted tumour, full of a solid matter which is either truly fatty, or gelatinous or albuminous, more or less intermixed or interwoven with cellular, cartilaginous, or bony fibres, and sometimes containing hair, bones, or teeth. Steatomatous tumours are formed, for the most part, on the external surface of the womb, and near its fundus, whilst polypi, hydatids, moles and the like, generally appear on its internal surface. They are sometimes attached to the womb by a narrow neck, but more frequently by a broad surface; and generally to the adjoining parts by cellular substance only; although it is probable that when the neck is narrow, capillary and lymphatic vessels make their way to the tumour by the cellular substance. From a small beginning they sometimes enlarge to the circumference of many feet, and to the weight of forty pounds and upwards. In one subject from ten to twenty of these steatomes have been observed, but then they are generally small in size. At the bottom of the uterus, their shape is for the most part round; if they stretch towards the pubis, it is rather oblong; when subjected to pressure, they become flatter. As in other encysted tumours, their external covering is a serous membrane, as is abundantly demonstrated by Bichat and Meckel. These membranes, like those that are natural to the body, are at all times shut sacs, either simple or formed of several coherent concentric layers, their structure cellular, their external surface covered for the most part with a

kind of downy or tufty matter, and their internal surface, if it has not adhered to its contents, smooth; they contain few blood vessels, but on the other hand an abundance of exhalants, and have no appearance of nerves. Their action resembles that of the natural serous membranes, when the latter are in a state of disease. But these cysts are sometimes fibrous, and have been also found bony and cartilaginous.

With regard to the FORMATION of Steatome, and of tumours in general, he refers us to the classical work of Meckel, and to Abernethy on tumours. Of course the contents of the cyst are formed from the exhalants on its internal surface; but although organic fibres are every where observed among these contents, it is very doubtful whether real muscular fibres have ever been found there. Tumours, particularly hard ones, which adhere to the surface of the womb, have not always a peculiar cyst, but are merely covered with peritonæum: even these, however, may be extirpated with as much ease as the encysted. The ovaria and parts adjacent to the womb, frequently become osseous; but the parts of generation in man are hardly ever ossified. The chemical analysis of uterine steatome has not yet been determined with sufficient accuracy.

Besides having steatomes appended to its external surface, the womb is liable to be affected with steatome through every part of its substance, by which it is not only enlarged to a great size, but has its nature so much altered as not to have a single vestige of its original texture remaining; and in this state of steatomatous degeneracy, its texture is extremely various. Without any cavity it is sometimes fat and fleshy, or it is changed into a gristly fat, or is seemingly composed of hard round and yellow little balls, in which last case the cavity is filled with a blackish putrid matter; and it also has been changed into a fungous fleshy substance, surrounded with vessels gorged with blood; its proper membrane set thick with white tallow-like tubercles, and its interior substance containing masses of a semi-osseous nature. In this last instance, the womb had no cavity, the ovaria were hardened, and the right one, as well as its tube, full of hydatids.

The PRODUCTION of such tumours is owing, as the author thinks, to an increased or rather to an irregular action of the formative principle which is said to reside in every part of the body, and is at all times more active in some parts than in others, particularly in the womb; but such tumours occur oftener in advanced life, Meckel never having observed fibrous and osseous tubercles before the fiftieth year, or about the time that the menstrual discharge ceases. Söemmerring never saw them in

women under twenty, but very often in old women. Unmarried and barren women are liable to them, but on the other hand are seldom attacked with schirrus or cancer. Their origin is frequently owing to an hereditary disposition; sometimes to gout and syphilis; but oftener it depends on too frequent coition, numerous pregnancies, abortion, laborious parturition, rough extraction of the placenta, inflammation of the womb during labour, improper suppression of uterine discharges, the abuse of stimulant emmenagogue and diuretic remedies, external violence, &c.; all of which act by producing either acute or chronic inflammation and consequent exudation of coagulable lymph.

The DANGER to be apprehended from these tumours will much depend on their situation, size, number, figure, hardness, and rapid or slow increase, on the age and constitution of the patient, or on the existence of other diseases, either previously or at the same time with the tumour. But it is not extraordinary that a steatome of the largest size sometimes give little or no uneasiness, seeing that women are accustomed to something analogous during pregnancy. From external tubercles the womb sometimes suffers severely, and at other times it is little or not at all affected by them; but most of those mechanical changes, which the womb undergoes from a variety of other causes, are also sometimes induced by the presence of external tumours.

But steatomes of this organ are attended by other SYMPTOMS, either primarily, or in consequence of mechanical changes; such as uterine pain of various kinds; irregularities and diseased action of the uterine secretions and excretions, the impossibility of conceiving, or real barrenness, extra-uterine pregnancy; the death of the child and consequent abortion; and difficult parturition, generally fatal in its consequences. It is always difficult to say, whether such tumours produce the diseased state of the womb, or whether they themselves are the effect of uterine disease. During the formation of steatome, or the steatomatous constitution, near and remote parts suffer, but at first little more than they do in the most natural state of pregnancy. The fallopian tubes and ovaria are first affected, and the mammæ are frequently indurated, and even sometimes become enlarged as if full of milk. The ureters and urinary bladder inflame, suppurate, or become indurated, &c. The rectum is often compressed, causing costiveness and piles. When the steatomes are very large, the whole tract of the intestines is pressed upon and pushed upwards, occasioning difficulty of breathing, symptoms of indigestion, colic pains, costiveness, nausea, simple vomiting, or even vomiting of blood, and sometimes inflammation of the bowels. When the greater blood

vessels or nerves are compressed, dropsy, consumption, hectic fever, and palsies are produced, which either gradually destroy the patient, or suddenly kill her.

C. F. Poenitz, the subject of the following CASE, was born of healthy parents. From her infancy she had a sickly look, and after her thirteenth year she began to complain of dyspeptic symptoms. When in her twenty-second year she was married to a corporal in the Saxon army, whom she accompanied on various expeditions, and dwelt with in various quarters. In her temper she was morose, and even obstinate, but at times could be cheerful. In her youth she was fond of dancing, and often indulged in it the whole night. She was temperate in her diet, and never drank spirits, but she was fond of coffee. When not on the march she spent much of her time in sewing. If her husband may be credited, she cared little about venery; but a surgeon who attended her, suspected, that she had indulged in it pretty freely in her youth.

In the early part of her married life, she had often miscarried, but never had been delivered of a living child. At the battle of Jena, in 1806, when in her thirty-sixth year, she was so alarmed, that her dyspeptic symptoms which were at that time present, suddenly left her, and she was attacked with rheumatism in the foot. In 1808, without any evident cause, the lower part of her belly began to swell, and as the menstrual discharge had stopt, she imagined that she was pregnant, and two midwives whom she consulted were of the same opinion. Soon after this, fever, with violent shivering, attacked her, which she still attributed to pregnancy; nor was she sensible of her error till the usual period of pregnancy had elapsed, and though the menses had returned the swelling was evidently on the increase. All along she complained of a slight dull pain, and of tension and weight in the lower belly, particularly on the left side. She had never used a suspensory bandage. The menstrual discharge had now become irregular, often not appearing for months, and had more the look of water than blood; but without pain. About a year before her death it had ceased entirely. For the last ten years of her life she had passed urine very sparingly, and ordinary diuretics had been of no use. Her bowels were regular, but the fæces generally liquid: for the last two years she had often vomited a sour fluid. Her dyspeptic symptoms, which for a long time had left her, now returned periodically, but were generally removed for a time by absorbents and bitters; as was the vomiting. The abdomen, meanwhile, swelled to a great size, and the navel became very prominent and livid, the rest of the body becoming much emaciated.

There was also difficulty of breathing, with a dry tormenting cough, sometimes relieved by demulcents. At times her misery was relieved by nocturnal sweats. During the last years of her life she had a slow but irregular fever, which at length carried her off in 1819, when in her forty-ninth year. Three days before her death, a yellowish thick opaque and fœtid humour, to the amount of three gallons, flowed from a small ulcer at her navel, which considerably relieved her breathing. On the day of her death the opening entirely closed. She had taken various medicines without effect; and in general a surgical operation had been thought impracticable, or at least dangerous. The body was opened at Leipsic forty hours after death.

On DISSECTION, it was found that the length of the body was sixty-seven Leipsic inches. The feet were not œdematous. The abdomen was round and greatly distended, inclining rather to the left side. There was an evident fluctuation within it. The circumference of the belly, between the navel and the iliac regions, was fifty-seven inches. The navel was pushed outwards nearly three inches; it was more than three inches broad, and its circumference was eleven inches and a half. The cutaneous veins of the extremities, particularly of the arms, were dilated and varicose, and looked as if they had been injected with wax. The adipose membrane of the belly contained a little thin serum, but hardly any fat. The peritonæum was thicker and firmer than usual; and upon dividing and laying it back a great quantity of water escaped, when a large tumour covering the viscera made its appearance, which had penetrated the dilated umbilical ring, and had passed into the spacious cavity of the protruded navel, occupying all its internal surface. This cavity, as well as the lower cavity of the abdomen, and the interstices of the tumour and bowels, contained a good deal of a muddy stinking fluid of a dirty yellow colour, and somewhat glutinous; with small strings of a kind of matter like coagulated albumen floating through it. Its quantity was about fifteen Leipsic pints or measures. Upon being boiled, it was changed almost entirely into an albuminous mass; a pint of it having only about two ounces of clear water. The omentum contained no fat, was about the thickness of the little finger, and being expanded over the tumour, seemed to float in the fluid. Its whole structure appeared like a beautiful network.

The tumour itself, or steatome, occupied almost entirely the space destined for the chylopoietic viscera, and extended from the little pelvis to the sternum. All that could be seen of the viscera was a part of the transverse colon, and on removing the omentum the larger curvature of the stomach; the remainder,

with the diaphragm, having been thrust upwards behind the tumour. The figure of the steatome was somewhat round, on its upper surface obtusely three cornered; its colour whitish, or approaching to that of pale flesh; its surface here and there slightly elevated or depressed, but its substance every where firm and elastic. It was appended to the womb, and in general adhered to no other organ, but by a loose cellular substance. Its greatest circumference was forty-six inches and a half, its diameter thirteen inches, and its weight, including that of the genital organs, was forty Leipsic pounds.

It was surrounded by a smooth solid membrane, partly serous, partly fibrous, firmly connected with the body of the tumour, and formed from the outer covering of the womb. The mass contained within it, at the first glance, had somewhat the appearance of thick lard, but did not grease the fingers, and looked like thickened gelatine or coagulated albumen, interwoven with very numerous fibres. Its hardness seemed intermediate to that of flesh or cartilage. In general, its outer surface to the depth of an inch was softer than the deeper seated parts. Its colour was a bluish-grey, but redder in the lower and back part. It contained cells of various magnitude, filled with a serous fluid of a yellowish red colour. Many vessels passed along the external membrane, and every part of the tumour, in general dilated, and varicose.

It was fixed to the fundus uteri by a roundish footstalk, nearly an inch thick, and half an inch long, formed from the substance of the womb, which was a little drawn out at this place, but in no respect diseased. The substance of the steatome was merely seated on the footstalk, and connected to it only by its outer membrane proceeding from the womb, and by its blood vessels. The form of the womb was regular, except that it jutted out where the footstalk had its origin, and that its neck was lengthened about four inches. The vagina was narrow, of its usual length, and with its wrinkles still entire; and it passed into the neck of the womb like a funnel. The tubes were dilated and ended towards the ovaria in large blind sores, filled with a muddy reddish-grey fluid. The ovaria were of a conical form, and fixed to the neighbouring parts by filaments of cellular substance, but in other respects healthy. The vessels of the internal parts of generation were much dilated. The urinary bladder and rectum were distended with urine and fæces. The other abdominal viscera were much shrunk and deprived of all their adipose matter, but otherwise healthy. The cavity of the thorax was much contracted, and the lungs were small and soft.

M. Kummer concludes his dissertation with some remarks on

the causes which may have given rise to the steatome, but we think it is not important to mention them. There are three engravings at the end of the dissertation, which furnish a very correct idea of the tumour.

THE MEDICAL DOCTRINES AND PRACTICE OF M. BROUSSAIS OF VAL DE GRACE*.

THE doctrines and practice of Broussais, which are at present creating so much discussion in France, appear to be an illegitimate branch of the Italian school, founded by Rasori, Borda, and Tommassini. Illegitimate we call them, in so far as Broussais, if we mistake not, does not acknowledge the source whence he derived his views; but, on the contrary, by means of new terms, or of old terms with new meanings, he has so masked and disguised his details, that even the tritest common places of the science assume in his hands an air of novelty. This is much promoted by the increasing neglect of the present generation for the old authors, and the eager desire for what is new; and it is much to be regretted, though we see not how it can be remedied, that the flimsiest production, if new, will be keenly devoured, while the works of Sydenham, Cullen, Hunter, Morgagni, and Bichât, are seldom to be seen out of the shelves of a library. Broussais, however, with all his pretensions to originality, and his censorious remarks on his professional brethren, must confess his obligations to his Italian masters, who, indeed, expressly claim him as a disciple of their school—(TOMMASSINI, *Dell' Infiammizione e della Febbre.*) It is singular enough that

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* Histoire des Phlegmasies, ou Inflammations Chroniques, fondées sur de Nouvelles Observations de Clinique, et d'Anatomie Pathologique. 8vo. Edit. 3me Paris, 1822. Et.

Examen des Doctrines Médicales et des Systèmes de Nosologie, &c. précédé de Propositions renfermant la Substance de la Médecine Physiologique. Par F. J. V. Broussais, D. M. &c. &c. 8vo. Paris, 1821.

Leçons du Docteur Broussais, sur le Phlegmasies Gastriques, dites Fièvres continues essentielles des Auteurs, et sur les Phlegmasies Cutanées Aigues. Par MM. E. de Caignou et A. Quemont. 8vo. Paris, 1819.

Principes Généraux de Physiologie-pathologique, co-ordonnés d'après la Doctrine de M. Broussais. Par L. J. Begin. 8vo. Paris, 1821.

Défense des Médecins Français contre le Docteur Broussais. Par S. P. Authenac, in l'Ann. Bibl. Février. 1822.

M. Broussais himself records distinctly the origin of his views, though he takes care to claim for himself the higher merit of systematizing them; that "Tommassini publici, dès 1805, que le caractère sthénique des maladies fébriles ne se borne pas aux premier jour. Dès-lors il soutint que la nature sthénique des maladies se conserve la même depuis le premier moment de l'invasion jusqu'au dernier degré de l'épuisement; que toutes les inflammations aiguës, chroniques, évidentes, obscures, sont de cette nature jusqu'à l'entier épuisement des forces, et qu'en un mot les phlegmasies, dont on rencontre les traces apres la mort, sont toujours la cause et jamais l'effet des fièvres qui ont existé durant la vie. La distinction des inflammations en sthéniques et en asthéniques fut donc regardée comme illusoire et purement spéculative."—(*Examen des Doctr. Med.*) We do not deny that M. Broussais has high merit, and that he has, by observation and dissection, done much to illustrate diseases; but we think he has himself made his merits appear less than they are, by his illiberal criticisms and his assuming pretensions.

M. Broussais received the earlier part of his medical education in the Ecole de Médicine, during the commencement of the Revolution, the bustle of which was not very favourable to study; and, accordingly, when he arrived in the north of Italy with the corps of the French army to which he had been appointed, he found himself so deficient in the knowledge of his profession, that he very laudably put himself under the instructions of Rasori and Tommassini. The doctrines of contra-stimulus had then scarcely been moulded into a system; but he learned enough to turn his attention from the system of Brown, then in its zenith on the Continent;—and in the very extensive experience which he afterwards had in the campaigns of Napoleon, he kept the Italian principles constantly in view, but contrived a vocabulary of his own for expressing them. This, however, he did very gradually; for, on comparing his early publications with his "Examen des Doctrines Medicales," published last year, we find almost nothing in common. M. Broussais, indeed, appears not to have had the most distant idea of forming a school, till the honour was actually thrust upon him in the French journals. But his ambition was easily kindled, and he instantly stood forward to assume the profered honour, and vindicate his claims to originality, by attacking all that was established and venerable in the profession, from Hippocrates to Dr. Wilson Philip, together with "la Médecine Française en general."

As we wish not to extend this paper, we shall give a brief

view of some of the doctrines of this innovator, and the practice founded on them.

M. Begin thinks it requisite to give formality to the system, by commencing with definitions of the vital properties, and the varieties of organization as to temperament and idiosyncrasy; but in all this we find nothing very peculiar, and much of common place. All that is really good seems to be borrowed, without acknowledgment, from Cabanis, (*Rapports Physiques et Morales,*) who, by the way, is unsparingly reprobated by Broussais. As it is thought the chief peculiarities of the school of Val de Grace are in the views given of inflammation and fever, we shall confine our notice principally to these.

INFLAMMATION, according to M. Broussais, may be of three kinds: Inflammation affecting, 1st, the red capillary vessels; 2d, the white capillary vessels; and 3d, both the red and the white capillary vessels. In the *first* variety, when irritation caused by a stimulus has affected any of the organs or of the tissues with acute inflammation of the sanguineous capillaries, the part affected becomes converted into a red mass, of a density and volume proportioned to circumstances. The violence of the pain and deepness of the colour are also variable, and from variety of causes and constitution it runs a variable course.

It may, for example, gradually disappear by the vessels regaining their natural fulness, and by the superabundant blood being naturally distributed, or carried off by some critical discharge either of blood or of the fluids derived from it. These critical discharges have been observed from the time of Hippocrates, and serve as very important guides to the medical practitioner. There may in this way be critical diarrhœa; critical epistaxis; critical hæmorrhoids; critical perspiration, which is perhaps the most common; and critical discharges of urine; and sometimes even critical menorrhœa.

When this resolution of the inflammation commences, the part inflamed becomes less hard and unyielding to the touch; the throbbing pain subsides; the high colour disappears; and the integuments resume their healthy appearance, frequently without leaving the least hardness or elevation, or any adhesion in the cellular membrane, which the nicest dissection can trace. This however is not always the case; for adhesions very frequently do occur, though no change has otherwise ensued in the structure of the membrane. When the affection is chiefly in the skin, it terminates by desquamating; when in the mucous membranes, after copious discharge of serous matter, which gradually becomes thick and of a purulent appearance, the mem-

brane either resumes its natural state or ulcerates; when in the fibrous structure, a thickening of the parts is produced which after a time disappears.

If the inflamed part returns not to a healthy state by resolution, it will either *suppurate* or become *gangrenous*. In the FIRST of these, which can only occur in expansible structures of the serous or cellular sort, the irritation is not limited to the capillary vessels carrying red blood. If it did, the inflammation could not continue so long as we often find it to do without producing pus, nor would the cellular and serous structures be capable of secreting pus without the symptoms of previous inflammation. Even when the suppurative process seems to be going on from inflammation of the sanguineous capillaries, it does not necessarily follow that they must secrete pus; for in the case of setons and of wounds and ulcers, the secretion of pus sometimes stops, though the redness and other marks of inflammation continue to exist. M. Broussais infers that suppuration is not necessary, but contingent to such inflammation; for pus may be secreted without this taking place, as is proved every day by dissection in cases where though pus has been copiously and long secreted and expectorated, yet no trace of suppuration nor ulceration can be found after death. Inflammation then often becomes chronic from being kept up by the pus.

In the *second* case, the inflamed parts are entirely destroyed, and become, in respect to the body, dead; or, as it is medically termed, GANGRENOUS. This may arise from several causes, such as, when morbid poisons destroy the parts, in plague, small-pox, &c.; when the increasing weakness of the vessels leads to the death of the parts which they nourish; or when the vessels are overpowered or burst by excess of inflammation, or a more rapid flow of blood than they can sustain. This is illustrated by referring to gangrene of the lungs, which is exceedingly rare, and must be so from the circumstance, that death usually supervenes before gangrene can take place, the lungs being so essential to the life of the system. When inflammation does terminate in gangrene of the lungs, only one of the lungs can become gangrenous, for both could not be so without instantly extinguishing life.

When inflammation does not terminate by resolution, suppuration, or gangrene, it assumes a prolonged and CHRONIC character. It is in the elucidating of this species of inflammation, that M. Broussais has been so much praised. It does not occur in all the structures of the system, though we have not discovered any specification of those not liable to it. When the red capillary vessels only are affected, the effect is a permanent

hardening of the parts affected, such as an hepatic state of the lungs, callosity in the cutis, and a thickening and induration of the mucous membranes. On the other hand, when the affection extends to the other capillaries, pus will be produced in the cellular structure, and in this case it will, like power, become the instrument of its own propagation, from the retention and decomposition of the pus giving rise to irritation. According indeed to the part affected, this kind of inflammation may produce tubercles, indurations, ulcers, pustules, tetters, vesicles, and even scrofula, malignant fungus, and scirrhus.

In all this, however, there appears to us little novelty, and in what follows concerning the other species of inflammation, characterised by the disorder occurring in the white capillaries only, there seems to be a great deal of unnecessary division and subdivision, and minuteness of detail founded more on a systematic plan than on accurate observation. Although arrangements of this kind are unquestionably of high utility, yet as they are all artificial, and tend to give us false views of facts, we are always very suspicious of them when they are carried, as in the present instance, to the extreme of minuteness. They do indeed give a work or a system a philosophical aspect, and an imposing appearance of accuracy; but this will in most cases tend more to acquire fame for the author than to give information to the reader, who will look in vain for his fine distinctions at the patient's bedside.

We shall next give a brief sketch of M. Broussais' doctrine of FEVER*. In the long list of afflictions to which the human system is liable, there are none which have so often abstracted the attention of medical men, as the various forms of fever. Ever since medicine had the rank of a science, this very formidable class of diseases has been the source of discussions and investigations, as boundless as they are vague and illusory. If we consult the history of medicine, even at its remotest periods, it will be found that each century gave rise to new doctrines, each promulgated with the plausible intention of explaining obscure phenomena, and adding to our mass of information; but neither of which, notwithstanding the authority of profound erudition and great names, have as yet dispelled the cloud that hangs over this intricate subject. Unfortunately for humanity, no other series of affections affords so extensive a range for speculation: unfortunately, because with such a field before them, many have leaped into the arena, with no other weapons for scientific con-

* CHAPMAN'S Journal, Vol. III. p. 345.

troversy, save those furnished by a brilliant imagination, or a fertile genius. Disdaining the treasures of pathological anatomy, as well as the inferences of clinical medicine, these medical theorists have erected their different edifices on the various explanations they have thought proper to adopt of the laws of animal economy. Can it be wondered then, that, composed of such materials, each successive creation of fancy should have vanished before its short-lived successor, and that almost every different portion of the world should have maintained its own theory against the opinions of its neighbours. It is thus that the doctrine of fevers, instead of being grounded on certain and well established facts, remains to the present day a never failing subject of endless disquisition.

Discouraging as this view may appear upon a superficial examination, we are not left without some hopes that the age of uncertainty is passed, and that in the progressive improvements which the physical sciences are constantly undergoing, that of medicine is also destined to partake in some degree. Until within a few years past, the diversified origin of febrile action has been universally admitted; and whether the doctrines of Brown, or Cullen, or more laterly those of the celebrated Pinel, swayed the medical sceptre, the partisans of the different sects were united in that belief. But in adapting that origin of the different views of fever, does not candour require the admission, that it has so often been obscured by collateral circumstances, made to suit the views of sectarians, that an impartial mind, in its search after truth, finds a correct discrimination no easy task? Notwithstanding all the labours which its obscurity has elicited, the nature of fever may still be considered a chimerical being—at least such is the impression of the advocates of a different view from that generally adopted. So difficult has it been found to define fever, that the attempt is not even made; and a brilliant and fanciful system is presented without even the form of a definition of the disease. And, perhaps, to a certain extent, the authors of these systems are not unjustifiable; for considering, as they have done, the nature of fever beyond their reach, they have preferred describing what they have seen and observed, to indefinite speculations. All definitions, indeed, are imperfect.

Be that nature what it may, it will advance the cause of medicine to collect with care, and to analyze with the closest scrutiny, whatever facts are presented to our observation. Scepticism in relation to the inferences to be drawn from facts, can alone ensure the foundation of any medical theory. The true character of fever will always be developed by searching for its probable source, before any other considerations take possession of our

attention. That a local origin will finally be acknowledged as the only cause of all fevers, is a position which now appears to occupy the medical world; but like all other opinions which are in opposition to the passions and the interests of a portion of mankind, it meets with resistance or support according as they predominate. It is far from our intention, however, to deny, that many of those actively engaged in this discussion, are acting from the firmest principles of conviction, in the search after truth, not victory.

A doctrine entirely subversive of all those which have prevailed, and one which blots out of the nosological chart those diseases hitherto denominated primitive, could not fail of exciting numerous criticisms and unbounded animadversions. The reputed teacher of these opinions is our author, a Professor of the Military Hospital of Instruction in Paris. Possessed of a vast fund of information, acquired by a long series of practice in almost every climate of Europe, while attached to the French armies, this gentleman published, in the year 1808, a History of Phlegmasiæ or Chronical Inflammations, which has served as the ground work of his doctrine, more recently presented to the public under the title of Examination of the Medical Doctrine, generally adopted. Before we proceed further in the elucidation of these views of fever, it behoves us to state, that some doubts exist whether they are wholly, or, in other words, originally, those of M. Broussais; and, upon inquiry, it will be found, that opinions somewhat similar to those he advocates are of a much older date than the present century. Thus Van Helmont believed, long since, that irritation was the cause of a great many diseases. He is the author of the ingenious simile between an inflamed part and an organ wounded by a thorn, a comparison subsequently illustrated by Vicq D'Azyr. Many contend that the ideas of Van Helmont have served as the basis of the modern theory of phlegmasiæ, and have thus furnished several elements of a doctrine entirely grounded on irritation.

At a later period, Senac, in his excellent treatise on fevers, in the chapter wherein he treats of its causes, observes, that "there are arguments not without weight, which tend to prove that the febrile cause is principally confined to some particular organ, or at least there is some part to which its action is more immediately directed and confined, and which is therefore a greater sufferer in consequence of that action."

The works of Chirac, of Sylva, of Marcus, and more especially of Chaffin, abound in expressions of doubt in relation to the nature of fever. The latter author, in his observations on fever, says, "This affection, which all authors have considered

as general, is, according to me, a very local affection." And in another part of his work on the nature of fevers, he adds, "All fevers are to be referred to local lesions, of which fever is only a symptom."

Views nearly assimilated to those I have just referred to, belong to the medical creed of Professors Chapman and Caldwell, and have frequently been promulgated in their lectures. The Elements of Therapeutics of the former gentleman afford evidence of his belief on this subject.

The names and quotations herein alluded to have been produced as much from a feeling of justice to those authors, as from a desire to prove, that whatever be the claims of M. Broussais to originality of ideas, those ideas have been entertained by other men whose pretensions to our respect are well founded. Even admitting that his claims to priority are not tenable, no where shall we find the inferences he has drawn, his complete history of phlegmasiæ, or his theory. But what constitutes the principal merit of M. Broussais, and which no one will dispute, are his numerous post mortem examinations, upon which is grounded the basis of his doctrine.

Irritation then being the pivot on which the modern doctrine of fevers rests, it becomes us to convey, as clearly as possible, the idea which is attached to it by the author. By irritation is meant that state of an organ wherein excitement has attained so great a degree of intensity, that the equilibrium, resulting from the balance of all the functions of the system, is completely destroyed. The moment that a focus of irritation, either acute or chronic, exists in the system, the healthy organs are disposed to take on similar actions as soon as a stimulating cause acts upon them with sufficient energy. In consequence of the sympathy of the heart with the irritated spot, a reaction of the circulatory system, or fever, is the result. Irritation may be termed the first stage of inflammation, yet it may occur without inflammation; if, on the contrary, the irritation is continued for a sufficient length of time, and acts upon the capillary system, inflammation will in most cases be produced.

Our author finally observes, that all local exaltation of the organic motions sufficient to disturb the harmony of the functions, and to alter (*dèsorganiser*) the texture wherein it is seated, is to be considered as inflammation.

The seat of this irritation is the next subject that will excite our inquiry. M. Broussais places it in the mucous membrane of the digestive canal. It must be conceded, that our notions on the pathology of this important order of membranes had been very limited until the appearance of Bichat, who first called

the attention of the profession to the various alterations of which they are susceptible. He appears to have clearly anticipated the subsequent labours of Broussais, when he says in his Anatomie Generale, that "there are few systems of the animal economy more deserving the attention of the physician, on account of the innumerable alterations it may undergo, and the simultaneous changes experienced by the vital properties so eminently predominating in those membranes."

There are many remarkable analogies between the phlegmasiæ of the mucous membranes. In the first place, no texture of the human system is oftener the seat of inflammation than this order of membranes; but the different parts which compose it are not equally accessible to irritating causes. Thus the inner surface of the lungs, as well as that of the digestive canal, are much more susceptible of inflammation than the internal coat of the ear, the larynx, or the urethra. It appears also that they are more liable than the serous membranes to that degree or species of inflammation which does not extend to contiguous textures; and that may perhaps be accounted for by the fact, that the latter are generally more remote from the operations of the different stimuli, while they are usually in direct contact with the former. The constant exposure likewise of these membranes in the lungs, to the influence of every noxious principle floating in the air; and in the alimentary canal, to that of every substance destined to reach the stomach for digestion—are circumstances highly favourable to the very frequent production of phlegmasiæ. That they do exist much oftener than we have hitherto been aware of, is already admitted; and this fact is due to the investigations of Broussais.

Consistent with these notions of the influence which the mucous system is called to exercise on the animal economy, and which we consider grounded on the most rational observations of morbid anatomy, it will follow, according to our author's view of the disease, that all febrile action is secondary, or symptomatic. Every form under which fever may invade the human system, can be traced to a local principle. Thus those diseases hitherto called inflammatory, bilious, nervous, typhus, &c. are to be considered in future only as different stages of phlegmasiæ of the digestive canal, modified into each particular train of symptoms by temperament, idiosyncracies, climate, situation, season, &c. &c. In order to explain his views of the nature of fever, M. Broussais supposes a given number of individuals, who shall all be submitted to the action of a cause capable of producing fever. Thus, they shall experience the influence of a cold damp air, or they may be wet either by rain, or by

falling into water. In consequence of such exposure, one of these individuals will be attacked with what is termed inflammatory fever; a second with gastric fever; a third with remittent fever, &c. &c. What will the difference be between these individuals?—they will all be under febrile action, but each in a different degree, because each temperament, idiosyncrasy, &c. is different from that of his neighbour.

In the first individual, the application of cold will produce a determination from the circumference to the centre; the vital powers, and the blood, will be forced to the vicinity of the larger viscera; organic action will be excited in all the viscera, but more especially, through the immense extent of the mucous membrane of the pulmonary and gastric systems. This determination will be followed by a movement of expansion accompanied with fever, the duration of which may be twelve hours, twenty-four hours, or seven or nine days,—according as the concentration has produced a greater or a lesser degree of irritation in the principal viscera. Finally, this irritation will vanish with an impetuous restoration of the secretions, or by a hemorrhage, or the patient will be cured. This is inflammatory fever: it may also be the result of an irritation of the viscera, gradually occasioned by all those causes which excite the action of the blood-vessels, and by plethora.

The character of this disease is a general irritation of the viscera, having its particular seat in the mucuous membranes, and not in the cellular and serous textures, unless it be secondary. The irritations sometimes extends to the coats of the arteries, as noticed by Frank, and others. If this irritation is promptly removed, the patient is at once restored to health.

When, on the contrary, this irritation becomes concentrated towards one particular organ or system, the fever, which so far may be termed simple, inasmuch as it resulted from a general phlegmasiæ of the viscera, degenerates into a local phlegmasiæ. This particular stage of disease which is termed *raptus*, is noticed by authors, but their references have generally been made to the chest or cranium, which have usually been considered as the only seats of this determination, whereas the gastric phlegmasiæ which are of more frequent occurrence than the preceding ones, not being detected, have never received that degree of attention which their manifest importance entitles them to.

The second individual supposed by M. Broussais to be submitted to the influence of the same causes, will be affected with what may be termed gastric fever. In this case the mucous membrane of the alimentary canal is the immediate seat of a greater degree of irritation than any other part of the system.

The physician will find a dry tongue, thirst, inclination for acid drink, sensibility of the epigastrium, vomiting, pains in the abdomen, and dry heat, accompanied with a strong and full pulse. These two instances will suffice to point out M. Broussais' mode of reasoning, and will easily convince us of the possibility of classing fevers according to his method. The diversity of impressions made upon the different individuals will easily present to the mind the several varieties of fevers as they are now classed in nosological tables. The limits we have adopted in beginning our observations on M. B.'s views, preclude us from dwelling longer on this portion of his labours; but induce us, at the same time, to proceed to a few considerations on the practical treatment suited to these views. These will occupy but a very few moments; for when we once agree to call a disease inflammatory, its treatment is decided.

Notwithstanding erroneous impressions which have found their way into this country, six leeches do not constitute the effective force of M. Broussais' TREATMENT. His work abounds with proofs of a vigorous and efficient practice. He proportions, indeed, his depletion to the degree of the disease, and the constitution of his patient; but when the case requires it, he directs general, as well as topical bleeding; nay, he accompanies these directions with instructions to enforce absolute diet, that is, no other nourishment except a solution of gum arabic, which he would deny, could he find a more inert substance. Next to the depleting remedies, diluent drinks and emollient injections hold the first rank; by increasing the general mass of secretions, and by gently evacuating the intestinal canal, they remove from the system a quantum of irritations by no means inconsiderable. And with this expectation active carthartics are more sparingly used, but in cases where the bilary secretions are vitiated, purgatives are freely recommended. M. B. is by no means a partisan of the *methode expectante;* on the contrary, he directs all his efforts towards arresting the course of fever as rapidly as it can be effected.

We have now presented what is conceived to be a general outline of his treatment, such as we have been enabled to collect it from his confused stile and obscure phraseology. A more satisfactory one will be obtained by carefully meditating his works which certainly deserve an English translation, and a place in the library of every judicious or ambitious practitioner.

We are perfectly conscious that the views here advocated are not yet those of the majority of our medical brethren, and though the author has no doubt that these views will ultimately

reign triumphant, still a due respect for the opinions of others which should ever preside in all our investigations, induces us to trespass a few moments longer. These moments shall be employed in a few cursory remarks, explanatory of some part of the preceding observations.

It is asserted by those who are opposed to the dissemination of the new theory, that M. B. discerns what no one else can see: that what he calls inflammation is so called by any other practitioner. To this it may with great truth be replied, that what he calls inflammation after death, is so called by Morgagni, Lieutaud, Portal, Prost, and others. The latter especially, whose work on examinations of dead bodies, deserves to be better known. Though we cannot consider ourselves bound to defend the particular views which M. Broussais entertains respecting the appearances inflammation presents after death, and though we do not regard this as the proper place for even a full exposition of what appears to us a very lucid demonstration of these appearances, yet we feel ourselves called upon to protest in a most positive manner, against all inferences from any source but the author's own words. It is our cordial belief that the *ensemble* of his observations are the best commentary on his doctrine.

That a structure so eminently endowed with vital properties as the mucous membrane, richly supplied with capillaries of the most delicate ramifications, and by its situation, as well as its functions constantly exposed to impressions of an irritating nature, should be very susceptible of inflammatory action, is a position not beyond the limits of probability, it is one which is sanctioned by all our information in physiology, as well as pathology. Let us admit for a moment, that the organs are much oftener the seat of inflammation than is generally conceded, is it necessary to constitute the disease that the viscus affected, should be agitated by the more violent pains of inflammatory action? May it not be disordered by a state of excitement, subversive of its healthy functions, whence morbid sympathies originating, may be diffused over the whole system? Such a state will be found to exist, the symptoms of which may not be evidently inflammatory, but as nearly as it can approach towards that stage.

The acknowledgment that general or essential fevers do not exist, appears so great an improvement in our nosological views, that as a mere theory it strikes the mind at once with its importance. Let us, however, apply the doctrine to practical purposes, and select, as the subject of this application, the low remittent fevers usually considered of a typhoid nature. In these cases the predominating symptoms do not evidently suggest the existence

of a local engorgement, although they do occasionally denote such lesions; yet post mortem examinations convince us, in these very cases, of the existence of numerous stages of visceral disorganization. But, according to the received opinions, it is heresy to admit these appearances to have been original. They must be secondary, and the result of the disease. Experience, however, true in its results, will justify or condemn the reputation of these principles.

WISSMANN ON NUDATION, CARIES AND NECROSIS *.

The author of this tract professes to make public some new observations on the subject of some diseases of bones, drawn from the clinical practice of Dzondi, Professor of Surgery, and Director of the Hospital in the University of Halle.

He defines NUDATION as being a separation of the periosteum, or of a portion of a bone, so as to leave it exposed and bare. The discovery by the probe that a bone is bare, and deprived of periosteum, is not enough to determine the existence of nudation; the same circumstances being observed in the totally different affections of necrosis and caries. This is a mistake very commonly made in practice when the periosteum is destroyed, as in deep-seated whitlows, fistula lachrymalis, &c. Nudation is known by the periosteum being wanting in some part of the bone, its surface being either entire or partially removed, leaving the internal structure exposed. There is either no suppuration, or it is healthy and confined to the soft parts. The bare part of the bone has either not been at all exposed to the air, or for a very short space of time. There are no appearances of a groove in the circumference of the exposed part; that is, there are no signs of commencing absorption. There is not any inflammation of the internal parts of the bone. These signs, when all present, distinguish nudation from caries and necrosis. For if there be an unhealthy suppuration, either the bone has been exposed to the air, or has been long in a state of nudation, or it is affected with necrosis. If there be a groove in the circumference, the separation of the necrose portion has already commenced. If there be inflammation of the structure of the bone, caries is likely to be the consequence.

* De rite Cognoscendis et Curandis Nudatione, Carie, et Necrosi Ossium, Observationes Pathologico-Medicæ; Auctore L. Wissmann, M. et C. D. 8vo. Halæ.

The nature of the CAUSES may assist the diagnosis: they are of two kinds; accidents and diseases. The accidents are wounds of all kinds, incised, contused, and particularly punctured wounds; and fractures, and division of portions of bone. The diseases causing nudation are chiefly inflammation and suppuration, and all the affections which excite inflammation in the periosteum, as rheumatism, &c.

Nothing can be more favourable than the PROGNOSIS of nudation, unless it should be injudiciously treated. Many mistakes are made as to the nature and treatment of this affection, the destruction of the periosteum as perceived by the probe, being often considered as a proof of caries, and treated accordingly.

The curative process consists in the adhesive inflammation and the effusion of coagulating lymph.

The TREATMENT recommended by M. Wissmann is simply a covering which may prevent the access of air and cold, and avoiding every thing which might irritate or disturb the exposed surface. No ointments, injections, frictions, tents, &c. are required. The wound is to be kept covered, leaving a free exit for matter. Suppuration rarely continues for any length of time, and the wound generally heals in from seven to fourteen days.

The word CARIES has no kind of relation to the disease it is employed to express. Caries is the effect of inflammation of a bone, and corresponds to the suppuration of soft parts. Hence it is commonly considered as ulceration of a bone, and in fact it is ulceration arising from and attended by inflammation. But as in soft parts there are two kinds of suppuration, the one healthy, and ending in cicatrization, the other malignant and destroying the parts still more; so also are there similar affections in bones. We sometimes observe an ulceration of bone ending in exfoliation, or recovering without it; on the contrary, frequent instances occur of malignant suppuration of bones, lasting for months and years, and destroying the parts in which it takes place. As in the soft parts this ulceration of bones is attended by ichorous discharges, fistulæ, &c.

The SYMPTOMS commonly ascribed to caries are nearly all uncertain, and many of them false. The loss of the periosteum, or the exposure of part of a bone cannot be considered as certain signs of caries, for we have already shewn that they attend nudation, without caries or necrosis. Roughness of the surface of a bone is uncertain, for it may be the consequence of an injury exposing the internal texture; while many bones also are naturally so rough as to give a deceptive impression when touched with a probe; and the irregularity of a bone in a state of necrosis, from the progress of absorption, may give rise to

the same deception. The colour given by the matter to a silver probe, or a plaster containing lead, has been considered as more certain. But the discharge from an ulcer complicated with caries or necrosis does not give this colour to a probe, &c. unless from confinement or other causes it has begun to putrefy. Besides, pus of any kind, if it be long retained in an abscess or ulcer, produces the same effect. The peculiar odour has often been mentioned, and it cannot be denied that it frequently attends the suppuration of a bone, but it is not always present in this case, and occurs in many malignant and fistulous ulcers. From these circumstances it is clear that the symptoms commonly supposed to indicate caries are by no means decisive. But caries must be considered as caused by or consequent upon inflammation. Hence it follows, that where there is caries, it must have been preceded by symptoms of inflammation; these are obtuse and deep-seated pain, gradual swelling of the bone, the colour of the cutis remaining unaltered; suppuration occurring under the periosteum in the substance of the bone; the soft parts then become affected, and the matter makes its way through the integuments, the periosteum being destroyed.

INFLAMMATION of the periosteum must not be mistaken for disease of the bone; in the former case the periosteum being destroyed, the consequence is nudation or necrosis of the bone, but not caries. It is by no means an easy matter to distinguish between these affections, the symptoms of both, except the pain and swelling, being nearly similar. When the bone is inflamed the pain is less acute, the swelling softer and more circumscribed; when the periosteum is inflamed, both the pain and swelling are more considerable and extend farther. If inflammation and suppuration of a bone have occurred, the symptoms before mentioned, the loss of periosteum, the roughness of the surface of the bone, and the peculiar odour of the discharge, may assist in confirming the diagnosis; particularly if other circumstances correspond. Among these is the carneous excrescence surrounding the apertures of fistulæ leading to carious bone. It rises to the height of about a line, forming a ring or sphincter, with a minute opening from a fourth to a tenth of a line in diameter, and giving exit to the pus. The author considers this appearance as caused by the nature of the pus secreted by the bone, or changed by its contact, and supposes it to be a salutary operation, intended to prevent the access of air, and to promote the processes of absorption and exfoliation. If this be the case, what are we to think of the practice of those who do not hesitate to dilate and cut the orifices of carious ulcers? This symptom might be considered as pathognomic,

were it not that it is sometimes observed in necrosis with malignant suppuration from the confinement of matter, or the formation of osseous excrescences. But nothing more assists in the formation of a diagnosis than the knowledge of the causes which have produced the affection of the bone.

Scrofulous affections, and the disposition to scrofula, may be considered as the most frequent CAUSES of inflammation and caries of bones. With these may be classed the disposition to scirrhus and carcinoma, which, to the author, seems only scrofula in a more advanced stage and inveterate form. Syphilis sometimes causes caries, though more frequently necrosis, by the destruction of the periosteum. Rheumatism is rarely a cause of caries, and then in an indirect manner, as a consequence of long continued suppuration and improper treatment. The same may be said of mechanical causes, which, of themselves, never produce caries.

The PROGNOSIS depends on the state of the constitution, the age, and the favourable or unfavourable nature of adventitious circumstances, among which may be mentioned a proper or improper mode of treatment. A general scrofulous or carcinomatous habit in advanced life are most unfavourable. In such cases the disease is generally beyond the power of art; hectic ensues, and the patient perishes, unless the mutilation of a part should afford security to the system.

The NATURAL process of the CURE of caries is this; the orifice of the ulcer in the soft parts contracts; the carious bone, which the fungous excrescence already mentioned protects from the access of air, is removed by absorption and the formation of granulations, or by the occurrence of necrosis, the separation taking place insensibly in the form of powder, in plates, or by the total exfoliation of the affected parts. The time required for this process varies, according to circumstances, from a few weeks to months, and even years. The quantity of matter discharged from carious ulcers is more considerable than from those complicated with necrosis

The first principle in the TREATMENT is to remove the cause if it still exist. The cause which most frequently operates is scrofula, particularly in children, in whom it assumes the form of inflammation, suppuration, and caries of the articular ends of the bones. This disease is more easily palliated than cured, for which purpose we are directed to apply blisters, issues, setons, &c. The second indication is to keep a free exit for matter through a small opening; for if the matter be confined, it not only affects the bones, but causes increased inflammation and suppuration of the soft parts. For the same reasons, if abcesses

form, they are to be evacuated by a small opening, care being taken to facilitate the discharge of matter. Injections of tepid water may be employed, but never any of a stimulating nature. It is unnecessary and improper to distend the fistulous openings with tents, &c. The third indication is to favour the separation of the diseased part. This assistance can only be required when the powers of the system are inadequate from age and other unfavourable circumstances. If the system be healthy, the assistance of art is needless, beyond the attention to be paid to the local disease; for in a state of health and adequate excitement, stimulants are injurious by exciting action and exhausting strength. It is to be remembered that the soft parts are the organs which effect the cure, and to these our remedies must be applied with proper precautions. The remedies which the author recommends are, the topical application of heat, aromatic lotions, frictions and fomentations with spirituous, aromatic, and balsamic liquors, general and topical bathing, &c. Nothing can be supposed more hurtful than the injections formerly recommended, and even at present sometimes used, composed of tinctures and infusions of myrrh, camomile, asafœtida, phosphoric acid, essential oils, &c. Boyer, in his Treatise on Diseases of Bones, has recommended the employment of the actual cautery, to which the author objects, that if the caries depends on constitutional causes, this treatment will not effect a cure; and that if it be local, it may be removed without having recourse to so violent a remedy.

CARIES is a comparatively uncommon disease, and mostly a consequence of scrofula. The cases which are often mistaken for it are instances of nudation or necrosis of bone; as in whitlow, fistula lachrymalis, fistulæ about diseased teeth, affections of the spine, &c.

NECROSIS is the death of a portion of bone, which corresponds to the sphacelus and gangrene of soft parts. It is generally confined to the surface of a bone, varying in the depth to which it extends, and in the magnitude of the part affected. Occasionally, however, it includes the greater part or the whole of a bone, the dead portion being surrounded by a new formation. The dead bone or *sequestrum* acts as a foreign body, and keeps up a constant suppuration until it be removed. This total necrosis of a bone is frequently secondary, and the consequence of caries; for the disease is either primary, and without any preceding affection of the bone; or secondary, depending on an ulcer or caries. The matter in necrosis is secreted from the soft parts only, and the apertures in the new bone surrounding the sequestrum are not the consequence of the secretion of

pus by the dead portion, but because the matter secreted by the soft parts, surrounding the sequestrum is retained in, and cannot escape from the cavity between it and the new bone. Such is the explanation M. Wissman gives of the formation of the aperture in the newly generated bone, but he does not seem to be aware of the fact that the new formation presents a granulating surface to the sequestrum, and the apertures in it are intended to admit of the escape of the matter derived from this source.

It is sometimes more difficult to distinguish necrosis from nudation than from caries. The diagnostic SYMPTOMS of primary necrosis are, a separation of the periosteum from a part of a bone, as a consequence of disease producing inflammation and suppuration of the periosteum; or of accident, as a wound, fracture, &c. The author supposes that necrosis is never in the first instance the consequence of inflammation of a bone; if there has been inflammation the disease is caries, and if necrosis occurs it is secondary. We conceive that this opinion is doubtful, and indeed opposed to the results of observation. The duration of the disease affords the most satisfactory distinction between nudation and necrosis. If it has lasted above seven or nine days, it is fair to conclude that what was originally nudation has become necrosis. The nature of the probable causes, as, for instance, syphilis, &c. may throw some light on the disease. If the bone has been completely exposed for some hours or days, the disease must be necrosis; as it is known that the contact of the air always produces this disease. We differ on this point from the author, because instances are by no means uncommon, in which a portion of bone fairly exposed for some days shall ultimately granulate and recover without the occurrence of any sensible exfoliation. The general consequence of the application of irritating remedies to a bone is its death, so that we may in some cases draw conclusions as to the nature of the disease, from the applications that have been made to it. The existence of a groove, or depression in the circumference of an exposed portion of bone, proves not only that it is in a state of necrosis, but also, that exfoliation has commenced. The symptoms above enumerated may prove the existence of primary necrosis; when it is secondary, it is known by the previous occurrence of caries. Necrosis more commonly succeeds caries when it is of considerable extent, than when it is confined to a small space. In the latter instance the disease is cured by absorption, in the former by exfoliation.

The CAUSES of necrosis are either diseases or accidents. Of the first kind are inflammation and suppuration of the perios-

teum, syphilis, arthritis, scurvy, and metastasis. Of the second kind are, all injuries destroying the periosteum and exposing a part of the bone, as fractures, wounds, &c. A very common cause is injudicious treatment, such as the exposure of bones to the air by large incisions and dilations, and the use of irritating injections, which often change simple nudation into necrosis. The proximate cause of necrosis is a defective nutrition produced in various ways, but principally by the separation of the periosteum.

The PROGNOSIS in this disease depends principally on the state of the constitution, and the mode of treatment adopted. It is favourable when the health is good, when the causes producing the disease can be removed, and when it is properly treated. It is worse in secondary than in primary necrosis, because of the nature of the affections on which caries depends; such as scrofula, &c. It is better in young subjects than in old ones; when at a distance from, than when near to the articulation. It is worst in old, cachectic, scorbutic subjects.

The NATURAL CURE of necrosis takes place either by the total absorption of the dead portion, or by its separation from the living parts, constituting exfoliation; or lastly, by the formation of a new bone from the internal surface of the periosteum surrounding the old one. Exfoliation takes place in the following manner;—by the action of the absorbents in the living parts, a groove is formed between them and the dead portion. In proportion as this groove is extended in depth and circumference, it is filled up by granulations shooting out from the living parts, which continue to carry on the process of absorption. By this means the sequestrum is eventually detached, and propelled outwards by the continued growth of the granulations, its progress being facilitated by the progressive absorption of the superincumbent parts.

The TREATMENT of necrosis consists in facilitating the process of exfoliation. If the constitution be unaffected we should not interfere, for nature will effect the process without the assistance of art. If the disease arises from constitutional causes, our object must be to remove or relieve these as far as may be possible. The local treatment should generally be the same as that recommended in the case of caries, leaving nature to effect the separation and exfoliation of the dead portion without disturbance. Every thing is to be avoided which may irritate or injure the soft parts, particularly the periosteum. For this reason the practices recommended by some are improper, such as perforating and scraping the dead part, which can only have the effect of irritating the subjacent living ones, and producing an

extension of the disease. The same may be said of stimulating injections. The actual cautery cannot be expected to check the progress of necrosis, or to facilitate the occurrence of exfoliation; on the contrary it must destroy the vitality of the parts to which it is applied. In certain cases the assistance of art is required for the purpose of removing the dead parts when separated. The necessity of this assistance may depend on the irregular form of the sequestrum, or on the nature of the parts which confine it. In removing the dead portion the neighbouring parts are to be as little injured as possible; and in the case of a new bone surrounding an old one, the former is to be opened by means of a trephine or saw, for the purpose of extracting the sequestrum. The wound is then to be treated as a simple ulcer, and the cure is ordinarily soon completed.

This little tract is interesting, not so much on account of any novelty in the opinions it contains, as because of the evidence it furnishes of the coincidence of the practice of some of the best German surgeons, with that of individuals who are the boast and honour of our own country: this coincidence is most remarkable and most important in the simple but scientific nature of the local treatment, and above all, in the conviction of the constitutional origin of local diseases, and of the necessity and utility of keeping this fact in view, in our attempts to restore the parts to a state of health.

Marx on the structure and life of the Veins*.

The functions of the venous system, and the mode in which the circulation is carried on there, still remain in a state of considerable uncertainty. The difficulty does not so much consist in the absence of powers adequate to produce all the effects which we observe, as in determining the degree of importance to be attached individually to many concurrent circumstances. In giving an analysis of the work before us, it is our intention, as far as is possible, to bring together and contrast the differences in the opinions of some of the best authorities on the subject.

The ideas of the ancients on the structure and functions of the

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* Diatribe Anatomico-Physiologica de Structura atque Vita Venarum, a medicorum ordine Heidelbergensi præmio proposito ornata. Auctore Henrico Marx. 8vo. Carlsruhæ.

veins were so confined and so erroneous, that it is in vain to look for any information from that source.

VEINS are composed of the same number of coats as *arteries*, their parietes, however, being much more thin and delicate. The cellular covering of veins is of two kinds; the one external, connecting them to the surrounding parts, and similar to the cellular tissue in other parts of the body; the other internal, white, firm, and elastic. According to Bichât, this last sends processes between the fibres of the middle coat, reaching even to the internal one, a circumstance in which the structure of veins differs decidedly from that of arteries. In some veins, this covering is wanting, particularly in the cerebral sinuses. According to Bichat, this coat of veins is never the seat of dropsical effusions, &c. an opinion which the author considers incorrect.

The fibrous tunic is extended through the whole of the venous system, in such a manner that it appears more distinctly in certain conditions and parts. The proper or MIDDLE COAT of the veins is composed not only of longitudinal, but also of layers of circular fibres, separated from each other by cellular membrane. It is distinguished from the corresponding coat of arteries, by the smaller degree of cohesion between the different fibres, by the order in which they are placed, the longitudinal fibres being external and the circular ones internal, by the direction of the fibres which extend into the branches of the veins at the point of communication with the trunks, by being of a red colour, softer, more extensible, and less easily ruptured. The author agrees with Hunter and Bichât, in stating that this proper tunic is strongest in what Mr. Hunter calls "ascending veins," particularly the superficial ones. With Bichât he refers this to the erect posture of man, and states that he has not found this difference in the peacock, ox, and wolf. Cuvier (*Anat. Comp. Vol. IV.*) mentions that the middle coat is particularly evident in birds. With Mr. Hunter and Bichât also he states, that the thickness and firmness of the fibres and sides of the veins are in an inverse ratio to their size. With Bichât he asserts, that the middle tunic is wanting in the cerebral sinuses, though not in the veins which empty their contents into them. In the umbilical vein, he discovered some longitudinal fibres, particularly in the vicinity of the arteries. In children, the longitudinal fibres alone of the middle coat can be discovered. In adults, but particularly in old people, both the longitudinal and circular fibres are more evident, above all in the vena portæ, and in the renals, and in the branches of the inferior cava.

The author differs from Bichât, in asserting that the middle coat of veins is composed of circular as well as longitudinal fibres,

a circumstance which that writer expressly denies. Although Mr. Hunter speaks positively of their muscularity (by which he no doubt only means their contractilty,) he says nothing of the manner in which the fibres of their middle coat are arranged. Blumenbach denies the existence of a middle coat, excepting in the largest trunks.

The INTERNAL COAT is the membrane common to the whole vascular system, but which differs from the structure it presents in the arteries; in being more distensible and less fragile; in being much more delicate; in the comparative infrequency of concretions, (although too much insisted on by Bichât as the source of these distinctions;) and in the formation of valves.

The VALVES are formed by duplicatures of the internal coat, projecting into the cavity of the vessel. Mr. Hunter is of opinion that they are not formed solely by the internal coat, which is elastic, but that they contain a tendinous structure, an observation which the author has repeated. It would be a tedious task to follow him through the description of their form, number, situation and size. Bichât has satisfactorily explained the apparent variations in their size after death by the degree of distension or contraction of the vessel.

The coats of veins are supplied with vessels which, according to the observations of Hunter and Bichât, arise from and terminate in the arteries and veins in the vicinity. There is no reason to doubt that they are provided with lympathics, though these have not been demonstrated. According to Bichât, veins differ essentially from arteries in the small number of nerves, particularly of nerves from the ganglia which they receive. The author states, that Professor Tiedemann has demonstrated branches proceeding from the anterior pulmonary plexus to the pulmonary veins, and from the phrenic nerve to the superior cava. These filaments could be traced into the coats of those vessels.

The microscope, and still more the art of injection, have tended to determine the mode in which the veins commence. The arteries when arrived at their ultimate ramifications, are converted into veins, being sometimes reflected and sometimes entering the venous branches at right angles. The capillary arteries are not the only ones which terminate in this manner; some of a larger size have the same disposition. At the point where this change takes place, there is neither interspace, nor spongy, nor vesicular structure, but the inflected tube of the artery becomes continuous with the vein. Injections pass from either set of vessels to the other, except when their passage is interrupted by the valves of the veins. The veins originating in this manner, unite so as to form trunks. Some veins, such as the

subcutaneous veins of the extremities, are unaccompanied by any artery or nerve, and have no certain form, number, or communication; others, including the veins of the viscera, are accompanied by arteries or nerves, those of the brain and eye excepted. Hence arise two kinds of veins, the first internal accompanying the arteries; the others subcutaneous. This division of veins into superficial and deep seated is observed in some internal organs, particularly the kidnies in certain species of animals. The vena azygos is an instance of a vein not superficial without any corresponding artery. The veins of nerves have the same distribution as their arteries, but they do not pass out at the same points with those vessels. A similar disposition is observed in the brain. In the pia mater the veins are unattended by arteries, each set of vessels being separately distributed. In the liver, the arteries enter below; the veins pass out above. It is a commonly received opinion that the distribution of veins is liable to a greater variety than that of the corresponding arteries. Meckel has adopted an opposite opinion, and supported it by very ingenious arguments; he ascribes the common idea partly to the greater number of the veins, and partly to their larger size, but particularly to the fact, that after death the veins become more evident from being filled, whilst the arteries from their vacuity escape notice. The angles at which veins unite vary, sometimes at right angles, as in the lumbar and renal veins; sometimes at obtuse ones, as in some of the intercostals; generally at an acute one.

The ANASTOMOSES of veins are very numerous; most so in the smaller branches, where they form an intricate net-work; and less so in the trunks, though even here they occur much more frequently than in arteries of the same size. The object of these communications is evidently to facilitate circulation, and obviate the effects of the impression to which veins are liable.

The veins are generally larger than the arteries; this depends on the addition of the chyle to the mass of blood, but particularly that the velocity of the blood's course is diminished by passing from a smaller to a larger space, and by the diminished power of propulsion. Many illustrious men, such as Borelli, de Moor, Keil, Schwenke, Sauvage, Haller, Prochaska, have attempted to estimate the comparative capacity of the arteries and veins, but the circumstances are too variable to admit of just determination. The arteries, from their vital and mechanical powers, empty themselves after death, and the veins, having less power of resistance in addition to the blood circulating in them, receive that which the arteries contained.

The kind of death is a cause of considerable variety; in the

size and appearance of the veins in apoplexy and asphyxia, the veins have a size nearly double of that which they exhibit after death from hæmorrhage. Their state during life is still more liable to change; it is needless to mention the effects produced on these vessels by posture, temperature, exercise, &c. The ratio of the capacity of the veins to the arteries varies in different organs, being in a great measure dependent on the velocity of the blood's motion in the part. Thus the renal, bronchial, and thymic veins bear a smaller comparative ratio to their arteries, than the spermatic veins does to the spermatic artery. The ratio of the trunks and their branches is more variable than in the arteries. This, no doubt, depends in a great measure on the circumstances under which they are examined. In the dead body, at one time we find the smaller branches much distended, the trunk being comparatively empty, and vice versâ. It is probable, that the number of veins exceeds that of the arteries; plexuses of veins without any corresponding arteries are found in the neck, front of the arm, back of the hand, in the fingers, in the lower part of the thigh, and on the tarsus. The deep-seated veins accompanying the arteries are often double. The venous plexuses of certain organs often exceed the number of the arteries, as in the spermatic, vesical, and other plexuses of the pelvis. The numbers are equal in the intestines, stomach, spleen, kidneys, testes, and ovaria. Instances are less common in which the number of arteries is greatest, as in the umbilical cord, penis, clitoris, &c.

It is well known, that the FUNCTION of the veins is principally the return to the heart of the blood which has been propelled from it through the arteries. The analogy of the supposed alternate contraction of the arteries early suggested the idea, that the motion of the blood in the veins was produced by a power similar to that of the arterial system, more permanent in its action, and so insensible as to escape common observation. This power of the veins has, however, been denied by some who consider them as passive; and by others attributed to various properties, either common to organized and dead matter, or peculiar to the former. We shall abstain from any remarks on this subject until we have given a view of the author's enquiries and opinions. He tells us, that some celebrated men, such as Laurentius, Bellini, A. Pitcairn, and Hoffmann, have supposed that elasticity was the only power by which the veins acted upon their contents, maintaining at the same time that the heart was the principal and almost the sole agent in affecting the circulation.

He enumerates, among the effects of elasticity, the longitudinal, but more particularly the transverse dilatation of veins, and their restoration to their original size; the mode in which an

empty vein is contracted, and becomes narrower after the escape of the contained blood than it was during life; the retraction of a divided vein after death, though this phenomenon takes place less quickly than during life when it is assisted by vital contractility. He believes that the veins are elastic, and "in no inconsiderable degree." (TRAVERS's *Surgical Essays*, Part I. 260.) but that this power is not sufficient to resist the influx of blood and to propel it to the heart.

Harvey, Pecquet, and Glisson, granted a peristaltic motion to veins, depending, like that of the intestines, on the contraction of their fibres. Haller considered the veins as void of IRRITABILITY, or nearly so. Verschuir showed by argument and experiment, that irritability was extended not only to the cavæ and pulmonary veins, but also to their branches; "nor," says he, "have I found the other veins insensible to the application of stimuli, so that I cannot deny them a power of contraction when irritated, although I believe it to be less in degree than in the arteries."

Arguments, respecting the peculiar vital contractility of veins, would not be necessary if the venous fibres were muscular, and manifestly contracted on the application of stimuli; but the phenomena observed in them differ from those of the muscular and arterial fibre, and render it necessary to distinguish this structure from every other. Bichât established this fact more completely than any who preceded him, and Kramp, in his dissertation on the vitality of arteries, contends, that the irritability of muscles is of a very different nature from the contractility of the vessels. That the veins actually possess a power of vital contractility the author has endeavoured to prove, by some experiments of which we shall give an abstract.

The two ends of a divided vein retract in a living animal, but not in a dead one. If the portion of a vein included between two ligatures be punctured, the contained blood is quickly expelled. After death the escape of the blood is much more gradual. A vein, when wounded or divided, in a few minutes contracts so much that its orifice can hardly be discovered. This contraction is much more considerable during life than after death. The veins contract on the application of intense stimuli, particularly sulphuric acid and galvanism. They are not so much excited by cutting instruments, nitric acid, and the electric spark. Contraction sometimes follows slight stimuli, such as exposure to the air, cold water, and electricity.

The objections to this vital contraction are, that it does not always succeed the application of stimuli, and that the results of these experiments are very inconstant. Many causes may be

adduced to account for these circumstances. It is probable, that the relation of the contractile and elastic powers may vary at different times, in different branches and in different animals. M. Marx seems to have in some degree mistaken Mr. Travers's meaning, when he quotes him, to shew that veins are more susceptible of inflammation and adhesion than arteries. The author was unable to establish any certain ratio between the contractile and elastic powers of the veins, though he performed several comparative measurements for this purpose. Immediately after death, the galvanic pile produced violent contractions in the veins, but this effect ceased in a few hours. They shewed elasticity at the end of forty hours, but were not then affected by acids. He considers that sulphuric acid has a peculiar action, for others even more acrid, as concentrated nitric acid, produced no visible contraction.

It is probable that the veins are influenced by the nervous system, and in this way some of the variations in the circulation from mental affections may be accounted for. From analogy Kreysig (*Krankheiten des Herzens.*) contends, that the veins, although obscurely, are really sensible. Haller, on the contrary, and Bichât from experiment, deny animal sensibility to these vessels. According to the latter, no uneasiness follows their internal or external irritation, or the injection of bile, or of urine. The injection of air produces acute pain, but this is evidently referable, not to the veins but to the brain, for a certain interval occurs between the injection and the occurrence of the pain, whilst a similar injection into the portal system produces no inconvenience.

The causes which have been assigned for the VENOUS CIRCULATION are of two kinds, the one set acting mechanically, the other vitally. As the extremities of the arteries anastomose with those of the veins, it is evident that the influence of the heart's action must extend more or less through the one set of vessels to the other. But the author thinks, that this power cannot be sufficient to move the blood beyond the commencement of the veins, and considers that the impulse of the heart must be lost, from the angular course of the arteries, from the friction of their parietes, and from the minute size of the column of blood. For ourselves, although we are far from thinking, that this action of the ventricles is the sole cause of the venous circulation, yet we conceive that its influence is often too much underrated. It may be objected, that, if this influence was real, the venous blood should move by jets, and not in a continued stream. This objection is partly answered by the fact, that a very moderate increase of the heart's action, under certain circumstances, produces a jet-

like motion of the venous blood. That this does not occur more frequently is owing to several causes, to understand which it is necessary to advert to the circumstances which produce the pulsation of arteries, one of the principal of these is, the close adaptation of the coats to the artery of the column of blood contained in it, and the indisposition of these coats, either from mechanical or vital causes (sometimes, as in the common state of forced distention, from both,) to admit of any dilatation. The consequence is, that the sides of the vessel resisting distention, the whole impetus of the heart's action is transmitted to the contained column of blood, and produces the intermitting jet-like motion, characteristic of the arterial circulation. In the veins, circumstances are very different; instead of the firm, unyielding nature of the arterial coats, and their indisposition to admit of distention, we find those of the former set of vessels thin, soft in their texture, and susceptible of dilatation in an extraordinary degree. But if from any circumstances, such as from a forced distention much beyond the degree admitted of by the elasticity of their coats, or from an increased exertion of the power of vital contraction and resistance to distention, the sides of the veins should be like those of the arteries indisposed to yield, the same effect, namely pulsation, must occur as in the arterial system. For, physically speaking, a column of blood contained in, and completely filling an unyielding tube, is to all purposes a solid body, and an impulse communicated to one extremity must be immediately conveyed through its whole length to the other. Thus then the causes of venous pulsation are, first, the heart's action; and secondly, either a state of forced distention of the vein, or of increased resistance arising mechanically from the reaction of its elastic powers; or vitally, from an increased exertion of its contractility. That venous pulsation depends less on the kind or degree of the action of the heart than on the state of the vein, is probable from the fact that it is most commonly observed in the veins leading from an inflamed part, whilst we often have occasion to open veins in diseases arising from excessive action of the heart, without witnessing this phenomenon, as the vein opened does not lead from a diseased part.

In the ordinary state of circulation then, the heart's action, instead of being as in the arteries communicated to the column of blood in the veins, is divided partly between the contained blood, and the distensible coats of these vessels. It might be expected, that this partial communication of the heart's impulse to the column of blood should produce an alternating dilatation of the veins, a very possible thing, though, when we consider the extent of the surface of the column of blood to which

this alternate shock is given, we cannot expect, that its amount at any one point should be so considerable as to be perceived by the senses. This train of reasoning leads to the conclusion already drawn by Dr. W. Philip, that if the arteries were dilated by the systole of the heart, the extent of the surface affected by this dilatation is too considerable to admit of its observation. Dr. Philip believes in the reality of the occurrence, a point in which we dissent from him.

To return to the author; the second of his MECHANICAL CAUSES is the physical action of the capillary branches. He does not attach much consideration to this cause drawn by analogy from the circulation of plants (in which its application is equally doubtful), and the attraction of capillary tubes. Those who suggest such causes overlook the differences between living and unorganized matter.

The mode in which the mechanism of the valves assists the circulation in the veins is well understood; that they are not essential, is proved by their being in certain parts altogether wanting.

As to the FORM of the VENOUS SYSTEM, Haller classes among the causes of the accelerated motion of the blood the conical form of the veins, the area of the trunks being much smaller than that of the branches. The author objects that this does not assist in explaining the manner in which the blood is moved; but the fault is his own, for he quotes this passage to prove the general causes of the blood's motion, while Haller confines himself to the explanation of its accelerated velocity in particular situations.

The pressure of muscles and adjacent parts must, from the valvular structure of the veins, assist the circulation in them; it is equally evident that this assistance is not essential; for, as with the valves, that function occurs in certain parts without it.

The observations on the assistance afforded by the valves and the pressure of surrounding parts will equally apply to the anastomoses of veins.

The SUCTION influence of the HEART, has been frequently brought forward as a new discovery. Haller in his Physiology thinks it probable that the course of the blood may be assisted by the formation of a vacuum, and he quotes Rudiger, who agrees with him on this subject. Since that time, it has been adopted by Wildegaus (*De causis motus progress. sang. in venis*, 1772), Wilson (*Inquiry into the moving powers, &c.* 1774), Hunter (*On the blood, &c.* 1794), Blumenbach (*Instit. Physiolog.* 1798), Zugenbühler (*Archiv. der Medicen. &c. &c.* 1817), and Schubarth (*Annallen der Physik*, 1817). The author objects

the following facts: The circulation in the lower animals without a heart; the occurrence of monsters without a heart; the continuation of circulation, notwithstanding many diseases of the heart; and the passage of the blood from the arterial to the venous capillaries in syncope, and asphyxia. We may answer to the first and second of these objections, that circulation with a heart and without one are very different things, and do not admit of a fair comparison. That arteries and veins have a power of acting on, and in a certain degree of moving their contained blood is undoubted; but there is no rational analogy between a motion of this kind, and the rapid steady current of the blood in perfect individuals of the higher classes of animals, in whom alone the suction influence of the heart can be supposed to operate. The third objection is unfounded, for either the structure of the auricle being changed so as to impede its functions, the venous circulation will be disturbed, or else those functions not being interrupted, the venous circulation will continue unaltered, unless it be remotely affected by the consequences of disease in the other cavities of the heart. There is, besides, no reason to doubt, although it requires still to be proved, that the circulation in the capillaries may continue when the action of the heart has ceased in syncope, &c. In short, we think there can be no doubt of the existence of this suction influence, and its power in assisting the circulation must be allowed to be considerable. It has been said, that as it acts interruptedly, there ought to be an alternate swelling and collapse of the veins, but what we have already said of the causes which obscure the action of the ventricles on the venous blood, may be applied in a similar manner in this instance.

It was to the peculiar action of the capillary system, that Bichât attributed the greater share in continuing the circulation in the veins. He admitted also, on hypothetical grounds, the existence of an absorbent function in the minute branches of the veins. It is easy to recognize the motives which induced him to form these opinions. One of the principal points of his physiology of the vascular systems was, that the influence of the heart was confined to the blood circulating in the arteries, and being null in the capillaries, could not, *a fortiori*, be extended to the veins. Besides this, he denied the irritability of the venous parietes, and confined the insensible organic contractility, which he admitted in them, to the functions of nutrition, as a necessary consequence of his refusal to admit the influence of the heart's action and the vital contractility of the coats of the veins, he was obliged to have recourse to the interposition of the capillary system. Although so much has been

said of this capillary system, and so much importance attributed to it in health and disease, we still need proofs of its existence. Of course, we do not mean to deny the presence of minute vessels communicating on the one hand with the arteries, and on the other with the veins; but simply, the accuracy of the hypothesis which sets them forth as distinct in their properties and functions from those two systems. On this point we have alluded only to Bichât's opinions, for what our author has said is wholly derived from him.

The CONTRACTILITY of the venous parietes and of the valves, are causes to which the author thinks too little attention has been directed. But he conceives, that as the mechanical causes assisting the motion of the venous blood would be by themselves insufficient to support this function, so the vital causes, namely the action of the capillary system, the contractility of the coats of the veins, and that of their valves, would prove inadequate if not assisted by the former. He sums up his account of the venous circulation in the following manner: The blood in the capillary system is in a slight degree influenced by the heart's action; it undergoes there a peculiar change; it enters the minute veins, partly from the physical and vital actions of the capillary system, and partly from the absorption by the veins themselves; it reaches the valves, vitally propelling it, and mechanically impeding its reflux; the parietes of the veins contract upon it, and are assisted by the pressure of the adjoining muscles, viscera, &c.: arrived in the larger trunks, it is influenced by the suction of the heart (which the author admits with hesitation), and finally rushes into the auricle.

Of the blood's innate power of motion, as the hypothetical cause for its circulation, the author justly remarks, that as it cannot be disproved by arguments, so it has never been demonstrated by observation. He is not, however, bold enough to take upon him to deny its existence. For ourselves, we shall only ask, in what other science but physiology could such a supposition, without any proof, receive a moment's consideration? Certainly in none; and we can see no reason why physiology should be encumbered with such imaginations.

We think that the author has underrated the vital powers which support the venous circulation. There are many situations in which the mechanical ones, except the influence of the action of the ventricle, can hardly be supposed to have much effect; such as the vena portæ, the vena umbilicalis, and the sinuses of the brain, and spinal marrow. There is no want of facts to shew that the contractility of the coats of the veins, unassisted by any other powers, is sufficient to propel within

certain limits the blood contained within them; but as we have already said, it is probable, that the rapid, steady circulation which we observe in perfect red-blooded animals, could not be carried on without a central agent of impulsion and absorption.

Besides the VENOUS PULSATION which we before alluded to, the same phenomenon occurs in certain circumstances which the author has enumerated. It may take place in a natural state, as a consequence of the muscularity of the termination of the cavæ and pulmonary veins; or as the effect of the regurgitation of the blood from the auricles. There is a degree of impropriety in applying the term pulsation in the first case, and we doubt whether the second ever occurs, independent of obstruction in the lungs, in the openings between the auricles and ventricles, in the aorta, or in the pulmonary artery. The diseases in which this venous pulsation, or rather regurgitation, takes place, are, besides those we have already mentioned, the last stages of phthisis and hydrothorax, general convulsions, &c.

The author's EXPERIMENTS intended to prove the VITAL CONTRACTILITY of the veins are very unsatisfactory. The fault lies rather in the method of investigation which he has adopted than in his exertions. Physiologists in general seem to confine their ideas of irritability to this property as it is found in the muscular fibre, and to overlook the variations which adapt it to the different modes in which its functions are performed. As a natural consequence, they have expected that the phenomena attendant on the exercise of this property should be uniform, and, by an incorrect process of reasoning, have denied its presence when this uniformity did not exist. Misled by peculiar opinions, they have paid attention only to the effects resulting from the application of stimulants to the different structures of the body: a very inconclusive test, and liable to much uncertainty. The occurrence of contraction on the application of stimuli may certainly in general be received as a proof of irritability; though even on this point, we may be deceived without accurate observation. But the reverse of this, the absence of contraction on the employment of stimuli, cannot be considered as decisive of the absence of irritability, particularly in structures not muscular. Much confusion on this subject existed in the time of Haller, but it has certainly been increased by the distinction which Bichât made between irritability and tonicity; or, as he calls them, sensible and insensible organic contractility. It seems certain, however, that there is no other difference in this instance than the degree, which has no claim to form a ground of distinction. His animal contractility is distinguished from the other two with even less propriety; the function is still the

same, the difference is only in the stimulant. It is very probable that Bichât formed these distinctions from the wish to draw a parallel between contractility (animal and organic), and sensibility (animal and organic). In the latter instance, it is probable that the difference is in the kind and not in the degree of the two properties, for we think it probable that the organic sensibility of Bichât is referable to some principle common to organized and dead matter.

To return to irritability, we believe (as we said on a former occasion) that all difficulties may be removed by considering irritability as a power of vital contraction modified by the peculiarities of the structures in which it exists, and the functions which it is employed to perform; and that more may be done to prove its absence or presence in individual parts by attentive observation of the living, the diseased, and recently dead bodies of animals, than by doubtful and cruel (because mostly unnecessary) experiments on living creatures.

M. Lagneau on Chancres *.

[We are indebted to an intelligent correspondent for the following original paper.—EDITOR.]

We are very doubtful if nice distinctions of any sores, much more of that numerous class called venereal, drawn from the aspect and appearance of the sores alone, can ever be of much practical utility. We have been led to this opinion, chiefly by the great difficulty which we have always found of making these sores and their definitions accord, without a considerable stretch of the imagination. But there are other and more weighty considerations, for causing us not to be over hasty in attaching much value to such distinctions and definitions. For the most part, they are drawn from one particular stage of the disorder only; though it is confessedly the case, that these sores frequently change their appearance as the disorder advances, so that what was an accurate enough description of the sore at one period, comes to be quite inapplicable at another. With regard to those sores usually denominated syphilitic and pseudo-syphilitic, their appearance may be modified in an infinite variety of ways. Gastric derangement existing at the same time, or occurring shortly after venereal infection, may so change the aspect of a sore, as that it shall agree with no given description. Every one in the profession knows the infinite debt of gratitude which we

* Dictionnaire de Medecine, Tome. V. 8vo. Paris, 1822.

owe to Mr. Abernethy for his luminous account of such affections. Now, as the kinds of gastric derangement are infinite, can we expect less than that the sores dependant in any degree upon that cause, shall present an infinite variety in their appearance?

Besides, we have no hesitation in saying, that syphilis, like almost all other diseases, gradually undergoes great changes in its character; and that at one time, or season of the year, for example, all the sores shall be malign, gangrenous, or phagedenic, while at others, they shall be so benign as to require very little attention for their cure. We may also remark, that many learned men in the profession believe that there are specific differences among venereal sores themselves, these sores not producing all kinds of sores promiscuously, but each producing its particular kind. Of this fact, however, we think it must be difficult to procure satisfactory proof.

GASTRIC DERANGEMENT, by which venereal sores are either modified or kept up, is of two kinds, habitual and accidental. For the cure of the former, besides purgative and tonic remedies, we have generally to employ mercury in small doses. For the removal of the latter, we seldom require to have recourse to any other means, than a brisk cathartic or two.

We have often seen sores and local ailments with every appearance of being dependant upon some constitutional irritation, even where no derangement of the gastric functions could be detected; the patients, in such cases, usually giving a favourable account of their health. Upon very minute enquiry, however, it will be found, that there is usually more or less of FEVERISH tendency in the constitution, as is indicated by irregular feelings of chill, followed by flushings of heat, and sometimes perspirations. In such cases, though there is nothing apparently wrong with the health, yet the sores or the local ailments refuse to yield to the common applications; and if the practitioner has overlooked this lurking feverishness, he usually prescribes mercury, because he knows not what to do.

This FEVERISH disposition will be found, we think, to be a very usual concomitant of primary chancre and other venereal sores, and is also another cause capable of producing numerous varieties in the appearance and progress of the sores which it accompanies. It exists also in many cases along with derangement of the digestive organs, thus giving rise to many new and complex varieties. We confess we have not yet made up our mind as to the cause of this feverishness. In the class of patients who are most frequently the subjects of venereal affections, we believe it must often depend, or at least be aggravated, by dissipation and an irregular mode of life. We cannot help thinking, however, that we have

seen it often occur, when we could detect no cause for its existence, except the presence of the venereal virus. We can hardly suppose, that it is the effect of the slight irritation which the local disorder produces, at least in all cases, although we confess that we have seen very slight local affections indeed, produce infinitely greater constitutional derangement than this we speak of. Is it not a fact, that almost all specific disorders produce less or more of fever when they attack the system? We could point out many instances. We are inclined to believe, therefore, that, at least, in not a few cases, chancres, and other specific sores of the syphilitic character, occasion some commotion in the system on the introduction of the virus. The primary venereal sore produces a change in the system, a disposition to take on particular actions, and there is no difficulty in conceiving, that the manifestations of this change may be irregular feverish disturbance.

We think the notion here suggested, receives support from the facts which may be collected from the TREATMENT pursued in this disorder; and also in some degree, accounts for the wonderful discrepancies, which at present prevail as to what ought to be its proper treatment. It is clear, that the non-mercurial treatment is in all cases strictly antiphlogistic, and such, as we find from experience, is best calculated to resolve a feverish state of the system. Rest, starvation, blood-letting, both local and general, purgatives, the warm bath, antimony, and so forth, are the usual means employed in the non-mercurial treatment. It is impossible to deny, that many affections purely venereal, have been cured by these means, and we presume to think, that the cure is effected principally by the removal of the feverish disposition. In this way, the disease is cured, by removing a certain train of symptoms to which it gives rise, and which symptoms, if permitted to go on, inevitably come to react upon the local affection.

Even to those who still prescribe mercury in syphilis, we can venture to recommend strict attention to this FEVERISH STATE of the system. We have no doubt in our own minds, that mercury is only a specific in so far as it is judiciously administered, and that violent salivations are often produced without the slightest addition of security being given, that the constitution shall not be affected by secondary symptoms; nay, the local symptoms are often aggravated to a great extent, by the rash and unguarded exhibition of mercury. If pains be taken by administering the warm bath, purgatives, and occasional doses of James's powder, &c. we not only make ourselves more secure of curing and eradicating the affection with which we con-

tend, but we do so at infinitely less expense to the general health.

We have been led to make these reflections, from the simple and yet satisfactory arrangement of CHANCRES in the article before us. They are divided simply into *primary*, and *consecutive*, or *secondary*, and are characterised chiefly as they are indolent, inflammatory, eating, gangrenous, and so forth. In almost all our English writings on the subject, the term chancre is confined to the primary sore.

M. Lagneau's article consists principally of an account of these sores as they occur in different regions and textures of the body. As to the treatment, the author adverts only to local means, which is another reason for our prefacing our paper with the preceding remarks. His DEFINITION of venereal sores in general is, that the ulcerated surface of them is of a greyish white colour, their edges more or less elevated, and that they are surrounded by more or less of hardening, engorgement, and inflammation of a deep red colour. Some sores are large and superficial, others deep and less extended, and occasionally they are elevated above the surface of the skin, or of the mucous membrane upon which they are situated. The primitive sores are more usually inflammatory; the secondary, indolent. When mentioning how far primary sores in their early stage may be considered capable of tainting the system, the author speaks most decidedly against the plan of destroying them by caustic. In this, so far as our observation and experience go, we perfectly concur with him. We cannot afford room to follow our author into all his plans of local treatment, which, in our opinion, ought to be much simpler than those recommended by him. The whole secret consists in applying soothing dressings to irritable sores, and stimulating dressings to indolent ones. It is to be remarked, however, that in some cases of irritable sores, the free application of caustic often produces a healthy state of the ulcer; but such a mode of treatment cannot be ventured upon without judgment and discretion. This also is the opinion of M. Lagneau, who speaks of having seen the inflammatory venereal sore, by the too long continued use of irritating dressings, degenerate into one of a cancerous nature, requiring extirpation. When sores are very inflammatory he thinks that they ought to be treated on antiphlogistic principles alone, without much regard, in the first instance, being paid to their origin; and that nothing but mild, tepid, local applications ought to be used, with sometimes the addition of a few drops of laudanum to render them more soothing.

Sores which are not particularly inflamed or irritated at first

often become so, notwithstanding our best directed efforts to prevent them, forming PHAGEDENIC or GANGRENOUS sores according to circumstances. The proper management of these sores we believe to be one of the most difficult things in surgery. Some of them extend in depth, undermining the surrounding integuments, and are known by their hard, red, bleeding edges, and by their foul, ash-coloured, sloughing surfaces. Anti-venereals, according to our author, always exasperate the condition of these sores. When situated on the male genitals they are exceedingly dangerous. They often depend, says M. Lagneau, on excitement of the muco-gastric membrane, and are to be treated by remedies directed to the relief of that excitement. Sometimes no cause can be discovered for their malignant spreading nature, in which case we are to be moderate in the use of any plan of treatment which we adopt. Opium, in doses from one to two or three grains, is to be used.

We think, that any proposal to treat phagedenic or gangrenous sores of a supposed venereal origin, upon one uniform plan, is likely in many cases to lead to very injurious practice. Too much care and caution cannot be used, to arrive at a clear notion of that particular fault in the state of the general health, upon which such sores usually depend. We are satisfied, that the success of the measures adopted will depend in a greater degree upon the accuracy and fidelity with which the general state of the system has been examined, than upon any plan of treatment which can be suggested by the appearance of the sores alone. Of course, the treatment must be regulated entirely by the state of the system.

There are two general states of the constitution, upon which venereal phagedena and gangrene will frequently be found to depend, or at least which accompany these dangerous modifications of syphilis. The first of these is an INFLAMMATORY state of the system; the second, an IRRITATED one. Now we are satisfied, that these different conditions cannot be known by merely studying the state and appearance of the sores. The sores may be the same, and yet depending on causes totally different. The treatment, it is obvious, must be also quite different in the one case and the other. The inflammatory state of the system more usually is present with the brown sloughing sore; and the irritated, with the black gangrenous sore: though this distinction is very far from being uniform.

Both of these conditions are marked by increased frequency of pulse, but in the inflammatory state, it is sharp, hard, and sometimes full, and not usually quite so frequent as we find it in the other case. In the irritated condition of the system

it is small, feeble, and the beats in some degree running into one another. The state of the surface and the countenance, afford strong characteristics of these different states of the system. In the irritated state, the skin is cold and shrunk, and the countenance depressed; the patient also usually feels cold and exhausted, though there is seldom any feeling of distinct rigor. On the other hand, in the inflammatory state, there is almost always a feverish heat of the skin, with dryness and harshness, a peculiar anxiety of the countenance, and flushing of the face, more or less permanent; the feeling of cold is of short duration, but frequently amounts to shivering. The stools are not usually faulty, though in the case of irritation they are almost always black.

We do not presume to advance any theory, as to the cause of these opposite states of the system producing or accompanying sores of a similar or nearly similar character, but one thing we think is very obvious, that the curative means must be very different, if not quite opposite, in the two cases. The employment of mercury is equally injurious in both instances; it aggravates the inflammatory tendency in the one, and only increases the torpor and depression of the system in the other. We have no faith whatever in any local application in either case. There is usually more or less of dead matter within the sores, to which no applications can be of any avail; it is to the edges then, where the diseased action is going on, that they must be applied, to produce any effect. All local interference, however, with this action, is found but to aggravate the complaint. Keeping the sores perfectly clean, and applying some mild application, is all that we think can be recommended, though, when the morbid action seems to be arrested, and the edges of the sore are become stationary, or indolent looking,—stimulating dressings may be cautiously employed.

When the condition of the system is inflammatory, bleeding freely from the arm, opening the bowels, prescribing antimonial powder in small repeated doses, and, as the inflammatory action yields, giving opium, will be found the most efficacious means of cure. In the irritated state of the system, after evacuating the bowels very freely, our chief dependance must be on opium given to the extent of a grain and a half every six hours, with bark in moderate doses, and the moderate use of wine. The quantity of opium used must be more or less according to circumstances. The use of the warm bath will, we believe, be a useful auxiliary in both cases, especially in the inflammatory.

SORES on the PENIS, says M. Lagneau, have a different appearance, according as they are situated on the prepuce or

parenchyma of the glans. In the latter case, the edges are more broken, irregular, and scooped out; the surface, instead of being lardaceous, is ordinarily more of a granular appearance than in venereal sores in other situations; their bottom is uneven, of the colour of wine lees, or covered with an eschar of a deep grey colour. Paraphymosis is usually the consequence of sores of an inflamed and irritated character upon the prepuce. Dangerous hemorrhage is often occasioned by the sloughing away of portions of the penis, for which we are recommended to use cauterisation, and compression with the introduction of a sound into the urethra. Although M. Lagneau recommends mild applications in almost all sores which are not indolent, yet there is one case where he ventures to recommend a contrary practice, which is, when an aguish fever of a bad type comes on at the same time with the sores; in such a case, stimulating decoctions, vinegar, and camphorated alcohol are to be employed along with the necessary internal treatment.

Sores on the female organs often communicate so much inflammation to the surrounding parts and cellular tissue, as to occasion collections of purulent matter in different situations. Emollient poultices should be the chief local remedies, and the abscesses are to be opened if they be slow in breaking. When the opening is too small, a fistula sometimes succeeds, for the cure of which we have usually to lay the abscess open. The matter of these abscesses is not often of the yellowish white colour of that of other abscesses; but is commonly reddish, and extremely fœtid, especially if situated near the rectum or vagina. Sores in the female organs often end in fistula into the urethra and rectum, of which we seldom obtain a perfect cure.

Sores about the anus, or within the rectum, are either primary or consecutive, and they appear equally in either sex. The first are situated usually among the rugæ of the skin around the anus, and are called *rhagades;* the discharge from them is often serous or bloody. The pain and irritation produced by these sores is sometimes excessive. We have seen unsuccessful attempts to cure these without mercury; indeed they almost always require more or less of it. As external applications, M. Lagneau recommends soothing treatment, or dressings of cerate containing opium. We know nothing better, when the pain is excessive, than touching them with the lunar caustic. Ulcers within the rectum offer nothing particular, unless when they perforate the coats of the intestine forming recto-vaginal fistula, of which the cure is difficult, if not impracticable.

Chancres of the nose, if internal, are almost always consecutive; if external they may be primary, and caused by commu-

nicating the matter to it by the finger or other means. External primary sores of the nose have their seat usually upon the alæ nasi, or lower part of the septum, and often proceed with great rapidity to the destruction of the skin and even the cartilages, unless arrested by a vigorous combination of internal and external remedies.

The mucous lining of the septum is frequently the seat of consecutive sores, which, unless arrested, usually penetrate the septum. When the ulceration is in the vault of the nostril the bones become carious, and great deformity is the consequence: when necrosis or caries takes place the cure is always tedious. Exfoliation, we have frequently observed, interferes with the action of the remedies, so that it is only after the removal of the diseased bone, that they can be employed with advantage. Sometimes ulcers attack the floor of the nostrils and penetrate to the mouth. If this opening be large, the voice is injured, and the aliments are apt to get into the nostrils. These disadvantages are in some degree remedied by wearing a metallic plate in the opening. The constitutional treatment of these sores consists of mercury and the sudorific woods. The length of time which they may require to be continued will depend upon the oldness of the affection, and upon the remedies previously administered. The local treatment consists of emollient and anodyne injections and fumigations. The author says he has often derived advantage, when the ulcers were not far from the anterior opening of the nose, from the application of some simple cerate, with the addition of an eighth part of calomel.

Chancres occasionally appear upon the lips, gums, and cheeks. Those upon the lips are sometimes primary, and are easily cured. When consecutive, however, they become very obstinate, and their true character is apt to be mistaken. They have hard edges and a thickened base; they often become the seat of sharp lancinating pains, and assume something of a carcinomatous appearance. They yield to mercury in conjunction with the sudorific woods. Consecutive ulcers of the gums take place with caries of the edges of the alveolar process. No remedies are applicable until the carious portion of bone comes away. Scorbutic is known from venereal ulceration by its having its seat upon the soft flesh at the neck of the teeth, by having some degree of thickening without hardening, and in place of being of a greyish colour, deep, and more or less circular, is of a livid red, superficial, bleeding from the slightest touch, and with very irregular edges. Aphthous ulceration, arising from irritation, often exists between the gum and lip, and even upon the tongue, but it is easily distinguished, and usually

disappears at the end of six or seven days without any treatment. Ulcers of the tongue are usually consecutive, and when depending upon a very old pox are generally very hollow, and contain a thick slough, but their base is neither hardened nor engorged like other venereal sores.

The THROAT is very frequently the seat of consecutive sores, and here they seldom manifest any remarkable degree of local sensibility. On this account they are often for a considerable time mistaken for sore throat from cold, or some other cause, until the ulcers, becoming more extensive, put on an appearance, which renders the origin of the disease no longer doubtful. It is to be remarked, says our author, that syphilitic sore throat often exists without ulceration, and then it is always of a very chronic nature. The throat becomes of a deep copper colour, and secretes a very viscid mucus, which cannot be detached without difficulty. We are not recommended, unless other more unequivocal symptoms exist, to adopt a very rigid anti-venereal treatment.

The throat is a part of which the sympathies are very numerous and important. It is the business of the medical man, therefore, to endeavour to ascertain if ulceration of it does not proceed from some of these sympathies, instead of being venereal. We think there can be no doubt, that even excoriations, or any other irritation existing about the genitals, especially in females, is capable of producing sore throat, particularly if the system be in any way disordered at the time. By removing the irritation of the parts, and calming the state of the system by cooling or other remedies, as may be indicated, the ulceration in the throat disappears. There is no necessity in these cases to use mercury. When the bowels become torpid and the stools black, we often see excoriations and other affections of the throat. Indeed, so far as we have observed, we are of opinion, that ulcerated sore throat, even when its venereal origin is the least unequivocal, is accompanied with disorder of the digestive system, and above all others requires, that the state of the general health should be attended to. The stools are almost uniformly black. Mild, purgative medicines repeated daily, or every two days, according to circumstances, produce the most beneficial effects upon these affections of the throat; and even should they fail to cure them completely, the system is at least brought into a state which admits of mercury being administered in smaller doses, and with less risk of every kind. As the skin also sympathises with the throat, and vice versa, the state of this organ, in all affections of the throat, claims particular attention.

Chancres of the PALATE are sometimes very rapid in their progress, destroying in a short time the substance of the soft parts so completely, as very much to injure the voice and deglutition. If the loss be not great, custom soon enables the patients to speak clearly and to swallow as perfectly as before. If the velum is perforated, but not to any great extent, there is some hope that in process of time the opening may nearly close up; but if the velum be completely divided, the patient must make up his mind to submit to the inconveniency for life, unless indeed the operation recommended by Professor Roux, of incising the edges and bringing them into apposition by means of sutures, be not found successful.

Chancres upon the TONSILS are very frequently met with. They are sometimes apt to be confounded with the excavations left by angina, and with the natural hollows and irregularities, which are found on the tonsils of some people, even in health. They are to be met with very deep in some individuals, and filled with a white tough matter of a very offensive odour, very similar to what we sometimes observe in the venereal sore of those parts. This white matter is easily removed by the end of a probe. Chancres of the tonsils are often exceedingly rapid in their progress, and require to be opposed with the most vigorous treatment, and even then they often run on to the complete destruction of the parts, especially if the practitioner have been late of being called, in which case M. Lagneau thinks it may be advisable to attempt altering their malignant action by the free application of the nitrate of silver.

Chancres of the PHARYNX are not unfrequent, though they often exist for a long time without being detected, when they happen to be concealed by the pillars or by the velum. They are most frequently the result of a very old latent venereal affection, often not appearing till twenty years after the primary disease. One lady had ulceration of the pharynx, with nocturnal pains, twenty-nine years after she had been cured of the primary complaint, which had been communicated to her by her husband. She applied leeches to the throat by the advice of physicians, and used other remedies on the supposition that it was simple angina. Her case is not unuseful in showing that this affection, like many others of a venereal origin, is capable of occasioning great irritation during the night; she had been deprived of sleep for many months. Softening gargles, rendered more or less anti-venereal towards the end of the treatment, with an addition of a quantity of the liquor of Van Swieten, the phagedenic cerate, or calomel, are the chief local means to be

depended upon. These ulcerations often occasion caries of the vertebræ of the neck.

We have, in some cases, seen the whole of the superior part of the pharynx, from the anterior edge of the velum, as far down the throat as could be seen, the seat of a very foul unmanageable ulceration of a syphilitic origin. The danger of this kind of ulceration is very great, especially if it threatens to attack the epiglottis, or to descend into the trachea. In one case we saw mercury used by a judicious surgeon, till the patient's mouth was affected, but it produced no change whatever on the character of the ulceration. As it is usually attended with symptoms of great debility and languor of the system, tonic remedies, such as bark, wine, and opium, are the most likely, we think, to be useful.

Chancres of the LARYNX and aspera arteria are amongst the most rare though dangerous symptoms of syphilis. Nicholas Massa mentions his having cured an ulcer of this kind in a French prince, who commanded the citadel of Milan, and in whom it had formed a fistula, opening upon the anterior part of the throat. Laryngeal phthisis from a venereal cause is probably often dependant on ulceration, and that indifferently, whether the alteration of the mucous membrane has, or has not, preceded caries of the cartilages. This opinion is strengthened when we perceive anti-venereal treatment to cure these affections, which it seldom does when the cartilages have become diseased. Much prudence is required in the treatment of venereal ulceration of the air passages; the employment of the mildest mercurial preparations, with sudorifics, the inhalation of emollient vapours, the application of leeches, blisters, and even a seton in the neck.

LARYNGEAL PHTHISIS from a venereal cause, can only be distinguished from the same complaint from other causes, by attending to the history of the case; but fortunately this circumstance alone is generally sufficient to enable us to acquire an accurate notion of the complaint. In those venereal cases which we have seen, there was always less or more of cough, with scanty purulent expectoration, feverish excitement, loss of the natural clear voice, more or less complete, emaciation, nocturnal perspirations, and generally more vascularity than natural of the mucous membrane of the pharynx, with pain, and occasionally slight external tumefaction about the larynx and top of the trachea—the pain always sensibly encreased by even slight pressure of these parts. The action of mercury, in moderate doses, in this complaint, is almost equally interesting with what is observed in the inflamed or thickened iris. The progress of the cure is rapid.

But it is to be aided by general bleeding if necessary, leeches to the front of the throat, blisters, and gentle purgative and sudorific medicines. The inhalation of cold air is above all things to be avoided, until the cure be completed, and even then relapse takes place from very slight causes, more especially from exposure to cold and moisture.

With regard to venereal sores of the SKIN, they occur in those situations most frequently where it is thinnest and most delicate, as about the nipples, eye lids, or around the nails; and also in those parts which are moistened by continual transpiration, as the umbilicus, perineum, (especially in women), the region of the pubes, between the fingers and toes, in the arm pits, behind the ears, and at the superior and internal part of the thighs. But as sores in these situations present little peculiar either in their nature or treatment, we shall not at present enter into their consideration.

SCHMIDT ON THE ERYSIPELAS OF INFANTS *.

THERE are three diseases of new born children which are with difficulty to be distinguished: erysipelas; induration of the cellular tissue; and trismus nascentium. The first affects the skin; the second the subjacent cellular tissue; and the third the muscles. The causes of the difficulty felt in discriminating these diseases, are—the rarity of their occurrence, which is almost confined to public institutions; neglect from the deficiency of proper attendants, and the incapability of the subjects to express their complaints; the similarity of the symptoms, and the rapidity of their progress; and inattention to the results of anatomical examination.

The ERYSIPELAS OF INFANTS has received many different names. By Sennert, Schulz, Storch, &c. it was called Macula Volatica, Purpura Volatica, Macula Convulsiva, Erysipelas cutis ambulatorium, Cutis tensa, Oedema concretum, Erysipelas neonatorum, &c. It remains a question whether there be any real difference between this disease and that described by the French writers, under the term, "endurcissement du tissu cellulaire," though it is very probable, that the varieties observed are unimportant and dependant on accidental circumstances. Some

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* Disquisitiones Physiologico-Pathologicæ de Erysipelate Neonatorum ejusdemque a nonnullis similibus Morbis differentia. Auctore, FRID. ADOLPH. SCHMIDT, M.D. Lipsiæ, 1821. 8vo.

English writers, such as Denman, Hulme, and Underwood, with Henck, a German author, have observed a disease differing equally from the erysipelas and the cases of the French writers, and which seems better entitled than the latter to the name of induration of the cellular tissue. It must be allowed, that to the French we are indebted for much information on this subject; nor can this be wondered at when we advert to their great opportunities of observation. The numbers of these cases which were wont to occur in the Hospital des Enfans trouvés, Hotêl Dieu, and Hospice de Vaugirard are truly astonishing. Tenon, in his Memoir on the Hospitals of Paris, estimated at 600 the annual average of the children affected with this disease in the Foundling Hospital only, the greater part of whom died. A circumstance which seems pretty clearly to prove, that the disease observed at Paris was the same with the erysipelas of the English writers is, that M. Andry, who dates the origin of this epidemic from 1639, does not hesitate to say, that the erysipelas described in Underwood's Treatise, was essentially the same affection as the induration of the cellular tissue. He afterwards asserts, that this induration was in France generally accompanied by erysipelas. (*Encyclopedie Methodique*, Art. *Medicine.*)

The Erysipelas of Infants occurs from a few days to six weeks, or later after birth. In some cases it already existed before birth. The attack is generally sudden, but sometimes is preceded by restlessness, convulsions, and diarrhœa. The violence of the disease differs according to the parts in which it commences; it is least severe when it affects the extremities; it is more so when it attacks the face, neck, chest, umbilicus, groins, or pudenda. The parts affected are either red, of a livid yellow, or black, without the peculiar shining of common erysipelas. Swelling occurs, and generally though not always, an increase of heat. The extremities, and the soles of the feet, are curved inwards by the swelling and induration. The occurrence of gangrene is common, particularly in the scrotum and pudenda. Sometimes the hardness and swelling last only a few days, in others for two or three weeks. The disappearance of the redness of the skin, the hardness and swelling remaining, is a symptom of approaching death. When the disease occurs on the abdomen, it sometimes disappears with metastasis to the internal parts, producing enlargement of the mesenteric glands, perceptible through the integuments.

There is generally much constitutional disturbance with great disorder of the functions of the bowels. The child's voice becomes weak and stridulous. The fever, which is rather symptomatic, than idiopathic, is sometimes however aggravated by

the appearance of the local disease. The skin is hot even to burning, and generally free from moisture; the occurrence of perspiration is sometimes a symptom of death. Convulsions approaching to tetanus mostly occur at some period of the disease. The duration assigned to the disease by authors has been very various. According to the French writers it terminates between the third and seventh day, whilst the English extend this term to the fifteenth. The fatal termination is produced in some cases by the violence of the febrile symptoms, in others by metastasis to the vital organs, and in many by prostration of strength and atrophy.

The appearances observed after DEATH are, hardness, swelling, and some degree of redness, the same as during life. The colour of the parts varies from red to yellow, dusky, and even black. The skin is thickened, condensed, more or less closely attached to the muscles, and containing a yellowish serum. The appearances in the great cavities vary according as they have, or have not been the seat of disease. The signs of inflammation are most frequently found in the abdomen. The liver is very frequently enlarged and more or less diseased.

Instead of attempting to point out the DIFFERENCES real, or supposed, between the erysipelas of children, and the induration of the cellular tissue, the author prefers to give a short description of the latter from the writings of the French, principally M. Andry, (*Encyclop. Method.* and *Histoire de la Societié de Medicine*, 1784.), and to allow his readers to draw their own conclusions. Although after the quotation he has already made of that author's opinion on the subject, we see no sufficient grounds for hesitation in admitting the identity of the two diseases; we shall follow his example in the persuasion, that this conviction will be strengthened by the comparison of M. Andry's description of the induration of the cellular tissue with that which we have already given of the erysipelas.

INDURATION of the CELLULAR TISSUE generally occurs within the first ten days after birth, suddenly, and without any precursory symptoms. The cellular tissue is hard and firm, particularly about the knees, in the upper and lower extremities, and in the region of the pubes. The tumour of the extremities, particularly of the lower, is so great that they seem incurvated; the soles of the feet are of a purple red colour, and convex. This redness very often (haud raro) extends to the feet, legs, belly, and even to the whole body. The hardness is such, that no impression is made by forcible pressure with the finger. The swelling and hardness sometimes extend to the deeper seated parts. The whole body, and above all, the indurated

parts are cold and unable to retain their natural temperature. Spasmodic contractions of the extremities and lower jaw often occur, preventing motion and deglutition. The voice of the patient is changed in a peculiar manner. The face presents an appearance of stupor. The indurated parts when cut into, allow the escape of much fluid, sometimes bloody, sometimes serous and coagulable by heat. The only difference of any importance between these two descriptions, is in the state of the temperature of the skin, but when we consider their close correspondence in every other particular, and the probability that this symptom might be influenced by accidental circumstances, it is hardly possible to suppose, that it can form a fair ground of distinction between them.

The author seems to have committed one inconsistency, for although he has not thought himself justified in considering the two supposed diseases as one, he has repeatedly quoted Andry's description of the "induration," for the purpose of completing the history he has himself given of the erysipelas of infants. Considering their identity as a point not yet proved, he should have avoided this step, which tends to throw the whole subject into confusion, and to render the distinction more difficult.

We have already said that Denman, Underwood, Hulme, and Henck, have described a form of disease supposed to differ equally from the erysipelas of infants, and from the induration of the French writers. To this the term *skin-bound* has been applied in our own language. In it, the skin is of a whitish yellow colour, like wax. The integuments are hard and unyielding to the touch, but not tumified as in erysipelas and the disease described by the French. The skin is unaffected by the motion of the muscles, and cannot be raised from them; this is more particularly observable in the face and extremities. The patients are always cold in the extreme. There is no appearance of pain being suffered, but the voice of the children differs from its ordinary state, and is stridulous as in the cases of erysipelas. The children always present a death-like appearance. When the disease proves fatal, it commonly terminates in less than a fortnight. There is no effusion discovered after death as in erysipelas; on the contrary, the affected parts are drier than natural, the disease appearing to arise from a thickening of the adipose membrane, and a collection of dense, dry, granular fat. Lodemann and Stieglitz (HUFELAND's *Journal.*) have compared this disease with phlegmatiæ dolens, to which they conceive it to bear considerable resemblance.

It will serve to shew the differences of opinion on this subject, to mention that some good writers, among others Mr.

John Burns (*Principles of Midwifery*), have considered the disease *(skin-bound)* above described, as being identical with the "endurcissement du tissu cellulaire." But we have already stated that M. Andry, who has left us the description of the induration, supposed it to be the same disease that Underwood has treated of under the name of erysipelas. It must be allowed that the differences between skin-bound and induration, such as the absence of swelling, and the pale waxy colour in the former, and the presence of effusion in the latter, are much more considerable than those between the latter and the erysipelas; but at the same time, the coincidence between induration and skin-bound, in respect of temperature is not less striking. Some symptoms are more or less common to all the three diseases, particularly the peculiar change of voice. The induration seems in some degree to form an intermediate gradation between erysipelas and skin-bound, though perhaps approaching nearer to the former. The parts affected in erysipelas and induration are nearly the same, namely, the extremities, pudenda, and umbilicus. In both, there is redness of the skin, but generally speaking, a remarkable difference in temperature. In both, trismus and convulsions are very common symptoms. In neither, will the swelling yield to pressure. In both, the swelling and hardness often extend to the deep-seated parts. In both, stupor is an occasional occurrence. In both, when the extremities are affected, they are remarkably incurvated. In both, the appearances after death are similar, such as effusion of serum or bloody lymph, thickening, and induration. The resemblance between induration and skin-bound is much less strongly marked, with the exception of the peculiar reduction of temperature. In skin-bound, the swelling and redness attendant on induration and erysipelas are wanting. The extremities are not incurvated, No mention is made of trismus or convulsions. The state of the parts after death is very different from that observed in induration and erysipelas.

The conclusions we would draw from this comparative view, are—1st, That there is no material difference between the symptoms attributed to the erysipelas of infants and the induration of the cellular tissue, the state of temperature excepted; but it is evident that if a case of erysipelas should occur with a cold skin, or a case of induration with a hot one, it would be impossible to make a distinction. M. Schmidt, in the work before us, asserts, that in erysipelas the skin is sometimes cold; but to prove this point he quotes M. Andry's History of the Induration, which of course cannot be considered evidence, when the difference or similarity of the two diseases is the point to be decided. On

this particular then, additional observations are desirable. The conclusion we have come to is much strengthened by coinciding with the opinion of M. Andry, who had had numerous opportunities of observing one of the diseases.

2. That assuming to be true, our first conclusion of the two descriptions applying to one disease, which we will call the erysipelas of infants, the skin-bound of Denman and Hulme differs very considerably from erysipelas, although the occasional coincidence in the state of temperature, may authorise us in doubting whether the differences are so decided as to justify us in separating the two. This is a point on which we wish to speak with hesitation. We have already said that some, particularly Mr. John Burns, consider skin-bound as identical with the induration. If it really be so, in the view which we take of the subject, it must also be identical with erysipelas. But if it be said, that the proofs of the identity of erysipelas and induration are inadequate, we reply, that those which assimilate induration and skin-bound are much more so, the differences being much greater. If the erysipelas and induration be supposed to be one disease, skin-bound may be considered a variety of it; but if they be distinguished, skin-bound must be separated from induration, and *à fortiori* from erysipelas; there must in fact be three diseases.

We shall not follow the author in his account of the causes and treatment of erysipelas, as these are neither very new nor very perfect. Much less shall we attempt to give an account of his hypothetical explanations of the symptoms of coldness and induration, founded on some peculiar views derived from Lagrange and others, on the mode in which animal heat is generated in the process of nutrition of all parts of the system. The same observation may be applied to the explanation of tetanus, by a consideration of the nature of muscular motion. He says nothing of the diagnosis of this disease, from those already mentioned. We could wish that the subjects of this Essay might attract the attention of those who are capable of elucidating them; and that those who possess them would favour the profession with the results of their observations.

Retrospective Review.

REMARKS ON THE SCURVY,

From the MSS. of DR. COOK, *Author of Travels in Russia, &c.*

[We think it proper to state, that on collating the MS. Lectures of Mr. John Hunter with his published works, we find so little that would prove new or interesting to our readers, that it appears unnecessary to insert the paper that we had promised. Merely, to give an account of his published works would be to repeat what is now so well known to the profession. We beg leave therefore to supply our retrospective department from the communication of our esteemed Correspondent who furnished us with the letters of Cullen.—EDITOR.]

THE following remarks on Scurvy are the result of real practice, and not merely a compilation. Those only, indeed, are capable of writing correctly on this subject, who have carefully attended to the phenomena of the disease in different stages, and as they arise in various constitutions, ages, and sexes, and who have noted the changes produced by medicines.

Some authors affirm that the SCURVY was not known in Europe before the middle of the sixteenth century; it seems to be the opinion of the far greater number, that it was altogether unknown to the ancients; but I intend to show, that Hippocrates knew the scurvy, and has described the symptoms of it, though he does not call it a scurvy, but a disease of the spleen, and proposes a cure for it, somewhat different from that of the present day. Thus, in his book *De Internis Affectionibus*, we find the following symptoms in chapters, 34—5; "The belly is inflated, the spleen swells, becomes hard and is very painful. The colour of the skin is changed, becoming black, pale, or like a pomegranate shell. The ears and the gums stink; the latter are separated from the teeth; and ulcers break out on the legs, like dark-red vesicles or blotches. The limbs are wasted away, and the belly is costive." For the cure he gives a purgative, and after it the juice of an herb resembling sorrel, and other vegetables with fresh animal food. The diet which he recommends is various and sometimes opposite; but he actually prescribes boiled vegetables to be eaten with vinegar, and radishes and parsley to be eaten raw with vinegar; and he prescribes violent exercise for thirty days, if the patient's strength will allow it. He also mentions blood bursting from the spleen

into the abdomen, and violent pain in the spleen, the mammæ, the clavicles, the shoulder, and under the shoulder blade. Here the skin is of a leaden colour; there are slight excoriations of the legs, which very soon degenerate into large ulcers; and the stools are bloody and of a purple colour. In this case, too, the belly is hard, and the spleen like a stone, and here the disease is for the most part fatal, in consequence of a general corruption of the body at length ensuing. The cure is nearly the same as in the former species.

Aretæus, also, has given the following description of it. "The complexion is of a dusky-pale colour, the patient is affected with languor and weariness, difficulty of breathing, as if a weight was on the breast, and with a short and for the most part a dry cough. Matter discharged from an abscess, for instance of the spleen, has always an unhealthy look; and if deep seated the discharge is even sometimes black. If the disease continue long, the patients lose their appetite, their habit of body becomes bad, they are œdematous, loathsome, and covered all over with ulcers, particularly in the legs. These ulcers are foul and very difficult of cure; but sometimes instead of ulcers there are merely hard indolent tumours. If the disease masters the patient, a dropsy, consumption of the lungs, or general emaciation ensues. Children and young people are very readily affected with the disease, but recover soon: old people, on the other hand, are not easily affected, but when they are it is seldom that they escape death; and sometimes they die of this disease, without its presence having been suspected. Young people are very liable to an attack of it, if they become all at once idle, after having been accustomed to much exercise. Stinking marshes, stagnating salt waters, and an inclement autumn are all favourable to its production."

In these descriptions, we undoubtedly observe the most important symptoms of the scurvy, and such is the opinion of Boerhaave, Van Swieten, and other able physicians; yet, it must be allowed, that the disease has been much more fully delineated by the moderns.

It is a very general opinion, that the scurvy is so little understood that no two physicians agree in the description of it, and the opinion has at least the appearance of being true; for one says there is a hot and a cold scurvy, another speaks of a land and a sea scurvy, and a third says there is but one scurvy. Again, some describe a great variety of symptoms; others but a very few, and probably too few, and perhaps we shall always meet with this difference of opinion, if physicians pay little or no attention to the different habits of their patients, to the state of

their various functions, or to the circumstances of constitution, age and sex, and make no allowance for the influence of climate or the change of seasons. But why should not physicians differ in opinion about diseases, as well as other men upon other subjects? Indeed, I fear it is in vain to hope, that we shall ever arrive at the certain knowledge of any one disease; and consequently, the opinions of men on such subjects never can be alike.

In making my remarks on scurvy, I shall describe the symptoms as they appear in three remarkable constitutions of the human frame, simply or in combination with Lues Venerea or Phthisis; and these symptoms I shall enumerate in the same order in which the patients commonly indicate them, or as they are gradually developed during the progress of the disease. I shall then attempt a definition of scurvy, and make some remarks on its causes, its diagnosis, prognosis, prophylaxis, and cure. In doing this, I mean to abstain as much as possible from theory; for I know, that many of our modern physicians despise the theories of their ancestors, particularly with regard to humours; but I suspect that, like the savage who can track his game by marks invisible to the inexperienced, the older physicians could detect changes and conditions of the humours, which appear chimerical to the physicians of the present day. As this knowledge was acquired by an unwearied attention to the phenomena of disease, it is not possible to acquire it by any other means. But I shall not enlarge on this subject at present. It is my intention to write intelligibly, and in as few words as possible; but I make no pretensions to elegance of diction or subtilty of argument; for armies and fleets, where I have spent much of my time, are not seminaries of learning.

A sense of fulness in the lower belly, with borborygmi, or troublesome fluctuosities or croakings, are among the very first SYMPTOMS of the scurvy, though not mentioned by authors; because the patient's appetite being still good, he scarcely complains to a physician, or if he does, his complaints are slightly passed over, and considered merely as the effect of flatulency. But, on questioning the patients, the far greater number will remember that they were sensible of such symptoms. These are succeeded by a tawny yellowish colour of the face, and concomitant with this, for the most part, a puffiness or slight swelling of the chondria, with a sense rather of uneasiness than pain, commonly in the sides, and at the same time, a great desire of ease and an unwillingness to move. Next come a breathlessness on the least exercise, greater propensity to ease, painful sensations in the sides, arms, and legs, and when getting

out of bed in a morning, a heaviness in the body, with an unusual painful sensation in the muscular fabric.

Then follow the indisputable or PATHOGNOMONIC SIGNS of the scurvy, taken notice of most accurately by Hippocrates, namely, a swelling of the gums, a stinking breath, exacerbation of the former symptoms, ulceration and rottenness of the gums, which are subject to spontaneous bleeding, a falling out of the teeth, red, livid, and black spots, tubercles, and ulcers, chiefly on the legs, but frequently throughout the whole body. In the last place, there is much increase of pain in almost every part of the body, bearing a resemblance to the pain of rheumatism and of other diseases; but the pain is more particularly severe in the glands of the lower belly, which in the ultimate stage is most commonly tumid, and sometimes very hard to the touch, and this is often occasioned by a schirrous state of the spleen and liver. Nay, in the last stage, and in extenuated subjects, the smaller mesenteric glands may be often felt with the hand. At this time, too, the ulcerations on the legs grow very large and scabby, with livid swollen lips; and sometimes both legs are quite covered with them. They are accompanied by irregular, intermittent, continued, and putrid fevers. The bones become carious. Great hæmorrhages ensue, often mortal, and from every part of the body, even from the skin, and without any external known cause. Lastly, violent diarhœas, dysenteries, nephritic complaints, and stranguaries, appear; the eyes are pale; the limbs, contracted; and in no long time, anxieties, tremblings, and faintings, finish the course of this hateful malady in death; unless a putrid, scorbutic fever intervene, which will kill the patient in three or four days, very few ever recovering after it, as mortification ensues immediately, even on the external parts of the body. Upon the whole, it may be affirmed, that this disease is as regular in its appearance as many others, if we make allowance for the difference of constitutions, and the greater or less intensity of causes in different individuals.

I shall now describe the three constitutions which I have already spoken of, and the appearances that scurvy makes in each of them; and in doing this, if I describe the symptoms with correctness, it matters little whether my theory is correct or not.

The PLETHORIC CONSTITUTION, when properly regulated, and in a healthy state, is the best of any; but when more blood is made than is absolutely necessary, the blood vessels are overstretched and lose their tone, and the brain and nervous system are oppressed and weakened. This, in general, is produced by indolence and inactivity of both mind and body; or by too often letting blood, and at last suddenly leaving it off; and in such a case,

if proper remedies are not used, inflammation, suppuration, mortification, and death, may very probably ensue. I shall now point out the natural progress that scurvy makes in such a constitution. I shall suppose that a person of that description, from living in a healthy climate, and being accustomed to wholesome animal and vegetable food, has been exposed for some months to a warm, moist, and impure air, which has been suddenly followed by cold weather; and that his diet, during that time, has been such as is favourable to the production of scurvy. In the first place, as the disease approaches, there is a universal weariness, laziness, and powerlessness of the whole body, a sense of pain in the muscular parts, felt especially in the morning after sleep, and a breathlessness in walking or using any kind of exercise. There is a stiffness of the legs, more remarkable towards evening; the face is of a browner and swarthier colour; the eyes have a dull and heavy look; there are severe headaches, and red spots and boils, often of a leaden colour, break out upon the legs and other parts of the body. There is an unusual bad taste in the mouth; the gums become swelled and painful, the pain gradually increasing, and on being even slightly rubbed they emit blood, and then are separated from the teeth; the teeth are gradually loosened, turn black, and at last become quite rotten; and at this time the gums are greatly swelled and ulcerated, and often emit much blood. Now the viscera and the sanguiferous system seem to be fast running into a putrid state; and dissection shows, that the glands, especially those of the lower belly, are either schirrous, or in a state of suppuration; and, it appears that the bursting of extensive abscesses, or a ruptured vessel pouring a deluge of blood into the abdomen, thorax, or lungs, are often the occasion of sudden death. And next, many of the ulcers on the body are covered with a black crusty scab, on the removal of which, deep ulcerations become visible, and discharge a corrosive stinking matter, being at the same time accompanied with great pain. And at this period of the disease, almost every part of the body is affected with severe wandering pain. It is in this constitution, that fevers, most commonly of the malignant kind, attack the patients, and often kill them in three days, or at most in seven; many parts of the body mortifying before death and falling off from the bones. At this time also, the patients are very subject to dysenteries, stranguaries, and anxieties that often prove fatal.

Let us now take a view of the ordinary progress of scurvy in a CONSTITUTION where the vessels are WEAK, and where there is consequently a want of good blood. A patient of this class is easily known by the pallid hue of his complexion, and by his natural

inclination to ease and aversion to any hard exercise. The vessels of his body hang loosely, and are continually changing their position, whilst the motion of his blood and other juices is slow and sluggish; and on this account, towards evening there is a tendency to œdema, particularly of the legs, more frequent in hot weather, or where a great use is made of the hot bath. The fat of such a person is also ill-conditioned, and is not dispersed through the body, in that proportion which is natural.

Here the first appearance of scurvy is denoted by uneasiness at the anterior edges of the false ribs, and in the lower belly, accompanied by borborygmi, or croakings and belchings. This uneasiness is soon followed by pain, the propensity to ease is gradually increased, and when the patient is obliged to use exercise, a still greater degree of dull pain is felt in every part of the muscular fabric. The colour of the eyes and skin is like the tallow of oxen, and becomes gradually more swarthy as the disease increases. The breathlessness becomes more troublesome, and increases always in proportion to the progress of the disease. There is a swelling in the legs, and in persons who never happened at any former time to have such swellings; although the skin may be quite free from spots. The next symptoms are a swelling of the gums and a fœtor in the mouth; and about this time, or very soon after, eruptions appear on the legs, arms, and upper part of the back, with considerable circumscribed swelling, but without any acute pain. As the swelling of the gums increases, the teeth begin to get loose, and their colour changes from white to yellow, brown, and black, when they commonly drop out. And now the gums are very much ulcerated, and the jaw bones, particularly the sockets of the teeth, are carious. At this time, the pains are increased, not only in the muscles but also in the bones, which last very often turn carious and are seldom curable.

In this stage of the disease, no part of the body is free from pain; but here the pain is comparatively less than in either of the other two constitutions, although putrefaction appears to be much more general, and offers a much stronger resistance to the most efficacious remedies. In the last stage, the patient is attacked by fever, first of the intermittent, then of the remittent and irratic, and lastly of the putrid, kind; the latter of which generally proves fatal. When these fevers begin, the patient complains of fixed deep-seated pain in the viscera, and he rarely gets rid of this pain, although cured of his other scorbutic symptoms, and dissection shews, that such pain is generally the effect of schirrus. The liver too has sometimes suppurated and discharged its contents into the abdomen, which

careless physicians have pronounced to be a dropsy, but dissection shewed the real nature of the case.

In the third CONSTITUTION I imagine that the blood vessels are very STRONG, and the muscles rigid; but in conjunction with these, I suppose that there is a sharpness and hardness of the blood and of the other fluids, which are a continual stimulus to their containing vessels, although they do not destroy their texture. This constitution has much more copious secretions and excretions in proportion to the ingesta than the plethoric; and it is capable of more exercise, and is able to undergo much more fatigue without the risk of acute diseases. In the plethoric, the complexion is ruddy and beautiful, the skin smooth and soft; but in this it is of a browner or darker hue, and the skin and muscles are hard and rigid to the touch. In the plethoric, the sides of a wound made with a cutting instrument, are easily brought together and retained; but in the third constitution this is extremely difficult, neither bandages nor adhesive plasters being sufficient, and even sutures sometimes giving way.

In this constitution, if exercise is not encouraged, scurvy makes a far speedier progress than in either of the other two; and proportionably to the rapidity of its progress, is the severity of the pain. As borborygmi and disorders in the digestive organs are naturally present in this constitution, it is not easy to take notice of the first approach of scurvy, or to say when such symptoms proceed from scurvy. The first mark of its invasion seems to be an ill taste in the mouth, accompanied by lassitude, love of ease, breathlessness, and pain flying through the body. The gums then swell, and readily bleed upon being rubbed, and shew a tendency to ulcerate; the teeth become loose; there is an alternate swelling and detumescence of the abdomen, attended by great costiveness, and there is much pain in the sides. Next, the gums ulcerate, and the patient is salivated as if he had taken mercury; especially if he be in any degree feverish; and I have known physicians suspected of giving mercury, when it was purely the effect of the disease. In the next stage, the teeth drop out; and as the pains are extremely acute and in almost every part of the body, the patient at one time imagines he has a pleurisy, and at another a stone in the kidney; and I have known unskilful physicians treat scorbutic patients as if they were labouring under such diseases *; but such treatment not only fixes the disease more firmly, but diminishes the patient's strength. At this time spots appear universally, and scabs of a much yellower colour than those in the other two

* See our Retrospective article in No. XV.

constitutions; and on the legs these very soon make their way to the bones in the form of ulcers, as the bones have already become carious before the ulcers reach them. In the last stage, if proper remedies are not speedily employed, consumptions, fevers, fluxes, violent hemorrhages, stranguaries, dropsies, contractions of the limbs, hard, livid, or red swellings of the lips, and convulsions, rapidly pursue one another, or go in company till they kill the patient. Sudden death is no rare occurrence.

I shall now speak of scurvy as it appears when complicated with LUES VENEREA and PHTHISIS, and shew how easily in this state it may impose on novices and on the unwary. The scurvy must always be inveterate, before we can suppose that the junction of lues with it can obstruct the cure or puzzle the physician; for I believe, that if scurvy were in its infancy, the remedies used to cure pox, would often remove many of the scorbutic causes. After salivation or other severe methods of curing lues, the patient, it is true, when any way inclinable to scurvy, is soon affected by it; but this almost constantly proceeds from his extreme weakness, and not from the action of mercury.

When the LUES, then, in conjunction with the scurvy, affects a patient, who was formerly of the healthiest constitution, it produces the following dreadful symptoms: The pains, at all times exquisitely acute, are intolerable in the night time, but they are not so much felt in the fleshy parts as in the bones. Not only are the gums affected, but the fauces, amygdalæ, testicles, prostate gland, and vesiculæ seminales, become swelled, and soon afterwards are subject to ulcerations of a very coroding nature. Buboes are often present, whether there is gonorrhœa or not. The whole body becomes scabby and ulcerous, and remarkably so on the forehead and eye-brows. The hand is covered with the several varieties of tinea. The external ulcers are of the phagedenic kind; the large ones produce a clear ichor, in considerable quantity, which, when it happens to lie upon any clean part of the skin till it dry, has the appearance of a hard and yellow glue; and when the ulcers are small, they are covered with a scabby scurf of nearly the same colour and consistence. Tophi, nodes, and exostosis, likewise make their appearance. Scurvy when joined to the above symptoms, moves on with a far greater celerity than it ever does alone in any of the above-mentioned constitutions. It has long been my opinion, that the disease called the hot scurvy, is either the lues venerea itself, or that disease joined with scurvy.

It is well known that, even in constitutions not disposed to PHTHISIS, that disease will often arise from scurvy, but in a scorbutic patient if there happen to be concretions and obstructions

in the bronchia, they become confirmed, and suddenly hasten to an unkindly suppuration. At the same time they are accompanied by a frequent sense of suffocation, anxiety, breathlessness, and very commonly, by palpitation of the heart, till at length the lungs ulcerate, and the patient's life is terminated by consumption of the whole body, and often by hæmoptysis. In such cases, eruptions on the skin are neither extensive nor frequent. Pain, however, is always present, and emaciation very suddenly ensues. The gums are ulcerated; but, in so far as I have observed, they discharge but a small quantity; of matter. A short time before death the belly clings to the back, the limbs are contracted, the skin is yellow, dry, and withered, and there is a constant expectoration of a brownish or bloody matter of a bad quality.

In CONSUMPTIVE cases of a scorbutic nature, whether pulmonary or mesenteric, I have often, before the patient's death, felt the mesenteric glands hard and as large as walnuts; and then the spleen, liver, and kidneys, are either wholly or in part schirrous, and often ulcerated. In this case the patients are attacked with trembling, rigor, and fainting, convulsions, and want of sleep. Nocturnal sweats are not so common as in pure phthisis; but flushes and fainting are more frequent. Such are the appearances which I have observed in a great variety of cases; and although all the symptoms may not be found in every case, yet they will certainly be present in the far greater number. By carefully attending to them, the practitioner will be enabled to detect the scurvy, even when complicated with many other diseases.

Such symptoms, therefore, indicate the presence of a disease, which, under the name of scurvy, destroys the balsamic quality of the blood and juices, and renders them unfit for nutrition, due secretion, and excretion; affecting in succession the fauces, œsophagus, stomach, intestines, lacteals, receptacle of the chyle, thoracic duct, and blood vessels; then the glandular fabric and excretory vessels, and at length every other part of the human body.

Under the head of CAUSES, I shall first of all mention the situations where I have observed the disease; describing, at the same time, the nature of the situations, the climate, the mode of life of the inhabitants, as noted by their lodgings, dress, food, and exercise, or ordinary habits; and also, the preceding or accompanying diseases.

Taverhoff, in N. lat. 51°.33′. and E. long. 39°. 20′. is situated on a low, sandy soil, nearly at the conflux of the rivers Don and Vorona, the former washing it on the west, the latter

on the north. In the vicinity, the banks of both rivers abound with great woods, full of marshes and stagnant lakes. To the south and east is a very extensive desert, the soil of which, for the most part, is sandy. The north bank of the Vorona, and the west of the Don, are high and hilly. The beginning of winter is in October. In November, all the rivers, lakes, and marshes are frozen, and the country is covered with snow, which generally remains till the end of March, or the beginning of April. The spring is very short; for in less than sixteen days the climate is quite changed from a very cold winter to a very hot summer. The heat goes on increasing till September, and at the same time is accompanied with much moisture from the rivers, lakes, and adjoining marshes. From the beginning of April till the middle of August, there is commonly severe weather; and after that, wind and rain. The summer is often sultry; and about sunset, especially in August and September, very thick and stinking fogs arise from the marshes.

The houses of the inhabitants are built of wood; and in winter their windows are caulked like the seams of a ship, and all their chambers have stoves, which render them exceedingly warm. In 1738—9, nearly thirty thousand boors were employed at this place in cutting wood for ship-building, and these men were all lodged in huts under ground. They had come, for the most part, from the kingdom of Casan.

Their clothing in summer is as light as ours, but in winter, it is of sheep skin, with the woollen side next the body. The food of the soldiers, sailors, and meaner inhabitants, in winter, consists of fish, almost fresh, which has been suffocated in the frozen lakes; of rye bread, salted cabbage, malt, and cucumbers; and their drink is water, quass, ale, and a very little brandy. As soon as summer comes in, they devour great quantities of green kail, cabbage, cucumbers, onions, melons, white orach, beets, and common sorrel boiled; they eat a great deal of fish, and a little flesh, and their bread and drink is the same as in winter.

Every day in the year, Sundays and some holidays excepted, the bell called them to work from six, *a.m.* till twelve, noon, and then from one till six, *p.m.* There were five or six hundred sailors who acted as overseers, and between two and three thousand soldiers, whose chief duty was to guard the boors and prevent people coming from places infected with the plague.

In the year 1738, in February, the soldiers and sailors were sent to the hospital affected with scurvy; their numbers increased in March; by the latter end of April they were recovering; and none remained in June but the most inveterate cases.

During the month of July, intermittent and remittent fevers prevailed, the latter of a malignant type. From the first to the twentieth of August we had fewer patients, but after that till the first of October, intermittents raged, and thin fluxes, attended with much pain, and followed by incurable obstructions of the abdominal glands. Serene frosty weather introduced inflammatory complaints. In 1739, the scurvy appeared at the same time, and ran the same course as last year; and there was the same succession of endemial disease, principally the malignant remittent fever, nearly as virulent as the plague which was in the neighbourhood.

Astrachan lies in 46°. 20′. N. lat. and in 48°. 1′. E. long. It is situated in a small island of the Volga, the waters of which river wash its walls on the west. There are many other islands in the neighbourhood, and both in them and in the adjacent continent, there are many salt lakes, and the soil in all of them is much impregnated with salt. The winter commonly begins in October and continues till March, and in January and February it is uncommonly severe. The summer is very dry and sultry, the thermometer of Fahrenheit being 100° and upwards, and rain seldom falls. The atmosphere is generally serene, although there are sometimes strong winds from the south for a few days.

The houses of the inhabitants are built of wood. The hospitals in 1740, all of wood, were situated on very low watery ground; so much so, that their foundations were quite rotten; and from these and the sick a very noisome smell constantly emanated. The dress of the people is nearly the same as at Taverhoff. The greatest part of their food consists of rye bread, meal, and fish, both fresh and salted. They eat flesh sometimes, but very seldom. Their drink is water. In summer they have fruit in abundance, consisting of grapes, white and red mulberries, and melons of all kinds. Even in the hospitals the soldiers seldom eat flesh, and never drink any thing but water, except when they are allowed decoctions by their surgeons. The sailors, all the year round, work very hard, both in the docks and at sea, but live much better than the soldiers or boors, having good provisions of all sorts. The boors are chiefly employed in navigating and fishing in the Volga, but they live a much more indolent life than the sailors. The garrison soldiers have little else to do than to mount guard, cut wood for fuel, and catch fish for the use of their own sick, and consequently are the most indolent of all.

The scurvy makes its greatest ravages amongst the soldiers, and it is less severe among the boors; but upon the sailors,

comparatively speaking, it makes little or no impression. The garrison, consisting of six thousand men, is every year recruited with from six hundred to a thousand men. The scurvy breaks out in the latter end of February, and is very commonly complicated with other diseases, such as lues venerea, diarrhœa, dropsy and phthisis. Pure scurvy seldom continues beyond June or the middle of July.

The soil about Riga, form any miles, is sandy, and interspersed with a great number of lakes and marshes. At Riga, the winter continues very long, but the cold is not so equally intense as at St. Petersburgh. The garrison soldiers are lodged in low barracks, built either of stone in the wall of the city, or of wood in a place where the butchers and executioners deposit the remains of dead animals. The air in the barracks is confined and warm, and the inner walls are continually covered with moisture. The habitations of the boors are more airy. The boors live better here than in Russia or Tartary, but the soldiers live as in the other parts of Russia, only that by their labour they gain money, and thus can often purchase meat in winter. Peter the Great had appropriated gardens for the use of the army hospitals, which were to be cultivated by the soldiers; but before my time the colonels of regiments had seized them for their own use, and thus deprived the sick soldiers of vegetables. With much trouble, I got them restored to the hospitals. The garrison soldiers, consisting of from six to seven thousand men, are most subject to the scurvy, those of marching regiments less so, and the boors least of all.

In Riga the scurvy raged in 1749, 50, 51, and generally began in the end of February, although some cases did not come to the hospital till April. In Taverhoff the scurvy was mild, in Astrachan severe, and in Riga worst of all. For an account of it, I refer to my letter, published in Lind's work on the scurvy.

Those people are most liable to scurvy who live in a cold, damp situation, and near the sea. The use, also, of a diet which consists of hung, salted, or putrescent flesh or fish, musty or long-kept flour or meal, stale cheese and butter, salted vegetables of all sorts, stale beer, and stinking water, is very favourable to its production. But it would appear, that such a diet alone is not sufficient to induce the disease, unless there is a great degree of indolence or at least irregular exercise, discontent, retention of natural evacuations, and too much irregular sleep. Where these circumstances are not present, the disease makes little or no progress.

It is well known, that a moderate degree of cold braces the fibres of the skin, and is hurtful only in excess, when it stops

the circulation and destroys sensation. By excess of cold, the blood is also deprived of its due quantity of serum, and the vessels which are exposed to the action of cold, having their diameter much lessened, a greater proportion of blood is forced upon the internal vessels than they can well bear, and the vena cava having at length become disturbed at its utmost stretch, all the abdominal veins are affected in like manner, in proportion to their weakness. Hence we may trace the origin of visceral obstructions, ulcerations, and swellings.

As the best springs by frequent use lose their elasticity, so the stoutest bodies may become relaxed and weakened by continued exposure to the action of CONFINED HEAT and MOISTURE. In Russia, the cold in winter is so severe, that the inhabitants are obliged to use every kind of contrivance in their houses to resist it; but as mankind are seldom moderate in those things where the gratification of their senses is concerned, the Russians universally make the air in their houses much warmer than it is in the hottest days of summer, and as among the lower orders, the whole family is crowded into one room, the air is very speedily contaminated with moisture and with the effluvia of human bodies. All this considered, it is indeed surprising, that they are in general so healthy. In the more elevated and drier parts of Russia, notwithstanding all their disadvantages, the scurvy is by no means so common as in those which I have described on the Don and at Astrachan; and among the Don Cossacks, though in general a cleanly active people, there is scarcely a house where some of the family are not scorbutic.

When the blood has been accumulated in the internal vessels, from the effects of cold, the sudden application of WARM MOIST AIR by debilitating the fibres, render the vessels unable to circulate the stagnating and corrupted blood, but in a more particular manner it weakens the excretory vessels. Thus, after severe winters, when the remote causes of scurvy have been in force, when the spring comes on at once warm and moist, violent putrid and scorbutic fevers manifest themselves, and even those who escape the fever are spotted like leopards over the whole body, but particularly the limbs; and it is at this time that the scurvy makes its greatest ravages. Those even who escape this season, have their constitution so broken down, that they die in the ensuing winter on the approach of cold weather. The warm dry air of summer also, debilitates the whole body, but at this season all the curable scorbutic patients, if the vessels are perceivable, recover; and though the state of the air contributes to the recovery, the change is chiefly brought about by the use of fresh animal and vegetable food and antiscorbutic

remedies, which furnish a supply of nutritious juices, and correct those that are morbid. But where there is much putrescent matter in the body, it is suddenly rendered very sharp and corrosive, and is thus the cause of those sudden deaths which so frequently happen to scorbutic patients in summer, as dissection has often shown. These scorbutic tophi swell more, and the pain becomes more exquisite; and the scorbutic ulcers enlarge with a fearful rapidity; but even in such circumstances, a cure may be made, if the internal constitution is not universally contaminated. The warm dry air generally kills all the hectic patients, and almost always contracts their enervated and emaciated limbs. In various countries, endemic diseases are produced entirely from the state of the air, when assisted by irregularities of various kinds. The blasts of the desert in Persia and Africa, it is said, often kill, but scorbutic patients are seldom affected by such winds. It is necessary, however, in the cure of scurvy, to attend to the quarter from which the winds blow; and great attention should be paid to this in the construction of hospitals. Cold air seems to have the least effect in causing scurvy. But however air, situation, lodging, clothing, indolence, and constitution may predispose to the disease, it appears to me, that food alone is the exciting cause; for when the disease has not made much progress, patients are readily restored to health by the use of fresh vegetables. This is uniformly the case by sea or land, and in all climates; and the disease is varied only by the quantity and quality of concomitant circumstances, and by the age, sex, and constitution of the patient. It may be remarked, however, that where the predisposing causes are absent, the constitution is much longer of being affected by improper diet.

If a pound of water be impregnated with a few grains of SALT, a pleasant beverage is formed; but if an ounce in place of a few grains be substituted, an emetic and diuretic liquor is formed. Salt consequently has very different effects on the human body, according to the preparation in which it is used. But pure salt alone never was blamed as the cause of scurvy, except when in combination with animal and vegetable food, upon which men have subsisted for too long a time. There it is a principal cause; for any nourishment that may remain in meat long salted, is separated with great difficulty from salt by the digestive powers of the human body, and more or less so according to the constitution of the individual. If any one, who is not accustomed to it, eat a plentiful meal of salted meat, he very soon will have many symptoms of fever, nor are his heat and restlessness, and want of sleep relieved, till he has drunk plentifully of some diluting liquor. The human body cannot change

salt into a matter strictly animal, and it may throw off easily enough the salt of a few meals, but when great quantities of salt continue to be received for some months, both solids and fluids must, in a great degree, be impregnated with it; and at length the body becomes so saturated as to acquire a saltishness sensible to the look. Inflamed parts grow worse when rubbed with sweet oil, and the evil is increased if the oil be mixed with salt. Will not then an analogous, or perhaps a worse mixture, produce baneful effects on the small vessels of the internal parts.

Now that the army and royal navy of Britain are under such admirable management, the scurvy is little known; and can we attribute it to any other cause than their present state being so infinitely superior to that of the old time, when all the causes of scurvy were in a state of permanent activity, as I myself have witnessed about the year 1733. Mr. Travis, of Scarborough, is of opinion, that scurvy was produced in the royal navy by the food being impregnated with a copper salt from the copper vessels in which the provisions of the sailors were dressed. This, no doubt, might greatly aggravate the disease; though it could have no share in producing it in the army, or at Taverhoff, Astrachan, Riga, and a thousand other places. But the theory is plausible. I have known a solution of blue vitriol used as an injection in the cure of gleet, produce a tremor over the whole body, and blotches on the skin in a man of very strong nerves; and that in the short space of twenty-four hours.

Dr. Millman, in the Medical Transactions, has given an instance where scurvy seems to have been induced by inanition, or a state approaching nearly to it; and where there was no predisposing cause but indolence. His theory is rational; indeed it is not very remote from mine; and the case may have occurred in any second constitution.

If what I have already mentioned as the pathognomonic signs of the scurvy were always present, its diagnosis would not be difficult; but as the disease has been known to kill, before these symptoms appeared, it would be desirable to know the disease independently of the pathognomonic signs. This is no easy matter, but it may, in general, be done with sufficient accuracy, if we attend carefully to all the concomitant circumstances of the disease, and to the previous history of the patient, for even if a patient with doubtful symptoms is known to be descended from a scorbutic parent, it is reasonable to think that an antiscorbutic treatment may cure him.

The older authors have been accused, perhaps erroneously, of confounding nervous complaints with scurvy; but I think

that the moderns sometimes are not free from the opposite error. On my return from Russia in 1752, I found the name of nervous disorders very generally applied to what, among the lower orders, I had no hesitation to call scurvy. These people who seldom tasted fresh animal food, but lived for the most part on a spare diet of the farinaceous kind, and inhabited a cold damp soil, had several hypochondriac symptoms, a pale bloated look, wandering pains, and frequently a cutaneous eruption, quite sufficient to excite the suspicion of a scorbutic taint, and a cure very speedily brought about by the use of antiscorbutic remedies, showed that the suspicion was well founded. But even when the symptoms of scurvy were disguised under the appearance of other complaints, so as not to be detected by an ordinary practitioner, the successful use of antiscorbutics has shown the real nature of the disease. Riverius thought that the scurvy was hypochondriasis in a malignant form; but it is only in the very commencement that it assumes the appearance of hypochondriasis; and various scorbutic symptoms may exist for a long time, without the dreadful train usually enumerated. Often, too, these symptoms are very partial outwards, when the disease has made great ravages on the internal parts.

I do not pretend to discover scurvy by a small quick and unequal pulse, or by urine, nor do I affirm that every anomalous eruption on the skin is symptomatic of scurvy; but if with these there exist quick breathing, palpitation, and laziness degenerating into lassitude, we may suspect scurvy. Fever is not a diognostic, though much oftener a concomitant of scurvy than Lind seems to be aware of, for not unfrequently it is complicated with a continued fever, or even with a tertian ague. In women the menses are colourless, and fluor albus is often present. Gout is known to be scorbutic by shifting suddenly from one joint to another; and atrophy, if scorbutic, cannot be cured but by anti-scorbutics.

When the causes that give rise to scurvy can be obviated, and when the disease is not far advanced, we may with great safety give a favourable prognosis; but it is otherwise when the disease is complicated or of long standing. In general, the weaker the constitution the more fatal the disease; and thus the patients, in my second constitution, especially when their disease is complicated with phthisis, very speedily become victims to it. Both the plethoric and rigid constitutions withstand it longest, when due evacuations and proper correctives are employed; but should they be attacked by a putrid fever, it will almost infallibly carry them off in four, or at most seven days. Great evacuations of blood, suppuration of the liver, bursting into the abdomen, and

dropsy of the belly and thorax, and extensive mortifications are constantly fatal. Great difficulty of breathing often ends suddenly in death, and when the belly is covered with scorbutic blotches, the disease is mortal; and when there are buboes in the groins or armpits, with livid spots over every part of the body, death will ensue with as much certainty as in the plague. The sudden disappearance of eruptions is a dangerous symptom. An attack of putrid fever, I have said, is generally fatal; but when the body is much enfeebled by scurvy, the supervening of almost any other disease will induce death. Thus fever, which in the commencement of scurvy is beneficial, at the end of it proves mortal.

It is not easy to prevent scurvy where the situation is unfavourable, and where other remote causes act strongly; but even then, warm clothing, regular exercise, and such amusements will go a great length towards its prevention. But if in addition to these, we can supply the patient with pure water, milk, fresh animal food, vegetables and good bread; if we can procure for him dry and comfortable lodging, and make him observe the strictest cleanliness of person, the scurvy never can make much progress.

When the scurvy was genuine, that is, unconnected with other diseases, we commonly began the cure with a gentle purge or two, and then ordered the decoctum scorbuticum and essentia anti-scorbutica, as mentioned by Dr. Nitzch, his method of cure being very generally employed in Russia, especially by the German physicians and surgeons. We also gave the patients twice every day, mixed with a little brandy, the expressed juice of wild horse-radish, which grows in great abundance in the neighbourhood of Astrachan. They had fresh meat every day, and cut sallads with acid plants. We had no lemon juice. They washed once a-week; and their wards were regularly fumigated. Before they eat or drank, or took medicines, they gargled their mouths and throats; and they washed their mouths with tincture of myrrh, gum lac, &c. We endeavoured to get some of the largest tumours to suppurate, and then allowed them to discharge as long as possible. Every morning and afternoon, when the weather was fine, the patients were forced to walk, and otherwise to use as much excercise as their strength would permit, and they were allowed but a very moderate degree of sleep, at the same time they were interdicted from the use of salted, hung, and fat meats. In the hot scurvy, a cure could not be obtained without the use of mercurial and antimonial preparations, with decoctum and essentia lignorum, &c. as nodes and tophi were often present, attended by a lipoa:—even in hectic habits I found this mode of cure necessary, unless the case (which rarely happened) was pure scorbutic.

In the hospitals of Riga, we used the Peruvian bark in scorbutic mortifications, but without benefit. Such was my cure, adapted both for the land and sea scurvy; for I had charge of the naval hospital of Astrachan for several years; nor did I ever find it unsuccessful, except in the most inverate cases.

In glancing over the great variety of writings published on scurvy, since the appearance of Dr. Lind's book, I find a vast number of remedies recommended, such as cider, spruce beer, wine, malt, vitriolic acid, vinegar, lemon juice, &c.; in short, the same remedies that have been used for nearly two hundred years, echoed and re-echoed by their respective favourers; all of them useful, with the aid of fresh animal and vegetable food, pure air and exercise, cleanliness and dry warm clothing, but without that aid, I may safely venture to affirm, unavailing. From what I have said about constitutions, it will not appear surprising to any one that the mode of cure, as recommended by authors, is sometimes contradictory. One person recommends blood-letting, as the scurvy, in his opinion, is an inflammatory disease; another advises a rich nourishing diet, as it is evidently a disease attended with debility and exhaustion; but the practice of both parties may be vindicated if my view of the scurvy is a just one, and I see nothing in it repugnant to reason. I venerate the great masters of the healing art, I treat their theories with respect, and I adopt or reject, only in so far as I conceive them to be true or untrue to nature. *Amicus Plato, sed magis amica veritas.*

British Review.

Medico-Chirurgical Transactions*.

This volume is prefaced by the following advertisement:—"It has been resolved by the President and Council, that the Society shall publish, half-yearly, namely, on the first of July, and the first of February, such papers as shall have been ordered by the Council for Publication. It has also been determined that the Council shall adjudge out of the funds of the Society, a Prize to the author of the paper that shall appear to them most

* Medico-Chirurgical Transactions. vol. xii. Part. 1. 8vo. London, 1822.

deserving of that honour, amongst those that shall have been read to the Society during the Session. In selecting papers for the prize, the choice shall not be confined to those written by members only, but it shall extend to all papers which shall have been read to the Society." The only objection to this scheme which occurs to us, is that it is too indefinite, both in not stating the value of the prize, and in not fixing upon a subject for competition. In this view, it cannot operate in the least as a stimulus to contributors, and except it be intended to do so, we cannot perceive its design. We heartily wish, however, that we may be mistaken, and that it may operate advantageously for the credit of the Society, and the advantage of the profession.

The first paper is by Dr. Marshall Hall, giving the cases of four children who had attempted, by mistake, to drink boiling water from the spout of a tea-kettle, with observations on the seat and treatment of the effects of this accident. The author imagines that he is the first who has taken notice of this accident; and from Mr. Stanley's Appendix it appears that it was new to the members of the Society. We, however, can justly claim the priority for this publication, so far as the paper before us is concerned, our predecessors having adverted to it so long ago as May 1820, in reviewing M. Bayle's work on the diseases of the larynx; and in our number for April last, we gave a very interesting case by Mr. Wallace of Dublin, in which the operation was successfully performed. Dr. Hall, indeed, appears to have copied our language almost verbatim in describing the symptoms, namely, "The effects of this accident are not, as might be supposed *à priori*, the symptoms of inflammation of the œsophagus and stomach, but of inflammation of the glottis and larynx, resembling those of *croup;* and the case constitutes another instance in which the operation of laryngotomy, or of tracheotomy, may be performed with the effect of preventing impending suffocation, and perhaps of saving life."—(Compare *Quart. Journ.* II. 236. with *Med. Chir. Trans.* XII. 2.)

It appears probable, that the boiling water does not actually penetrate into the stomach, or even into the gullet, but that its course is arrested by a spasmodic action of the muscles of the pharynx, from the epiglottis and the parts around it being scalded, till at length the rima glottidis becomes completely obstructed.

The first CASE is that of a little girl, aged three, who drank water nearly boiling, from the spout of a tea-kettle. For three or four hours, during which she had no assistance, dispnœa supervened, for which a medicine "containing oil and syrup," was recommended; but respiration continuing to become more

difficult, she was bled from the jugular vein, though this did not arrest the complaint, and leeches were ordered to be applied to the throat. Upon seeing the leeches she screamed violently, which had the effect of relieving the dyspnœa without the leeches, and the little sufferer recovered completely in the course of a week. The parents of the child suppose that the vesicles which impeded her breathing, were ruptured by the effort of screaming.

The next CASE was that of a boy, aged two, who had also drank water nearly boiling, from the spout of a tea-kettle. He cried out immediately, and in about four hours he began to labour and ruttle in breathing, these symptoms increasing gradually, till at length the face became livid, the feet cold, and he died from suffocation about 17 hours after the accident. He had no vomiting and little difficulty of swallowing. The dyspnœa was similar to that observed in croup. Oil and syrup, and bleeding, were prescribed without relief.

The third CASE was that of a little girl aged two years and a half, who also had drunk from the spout of a tea-kettle water nearly boiling. Upon her screaming out, she was immediately carried to a surgeon. We are not informed what was done for her; but whatever was prescribed was ineffectual, as she died from suffocation about ten hours after the accident. No dissection is mentioned.

The fourth CASE was that of a little girl, aged two years and a half, who had drunk from the spout of a tea-kettle water that had boiled ten minutes before. Oil, mucilage, and syrup were ordered; and five hours afterwards she was found to be affected with dyspnœa, and a hoarse croupy noise arising from the top of the larynx. There was no dysphagia nor coughing. The tongue and all the internal parts of the mouth were blanched and blistered. The pulse is mentioned to have been frequent; but we hold with Underwood, that the pulse is no good criterion of the state of the system in children, in consequence of their great susceptibility of irritation from slight causes. The dyspnœa increased so much as to threaten suffocation, tracheotomy was performed with immediate relief, twelve hours after the accident. The little patient sat up, played, and looked cheerful. The voice was gone, but respiration through the wound was quite free. Notwithstanding these favourable appearances, however, the patient died thirty-four hours after the operation, seemingly, as Dr. Hall thinks, from the exhausting influence of the primary disease. The DISSECTION is important. The epiglottis appeared to be swollen, blistered, and corrugated, as well as the fauces, tongue, and internal parts of the mouth. Neither the

œsophagus nor stomach were affected. The trachea was also healthy, there being no inflammation, even around the orifice made by the operation. Dr. Hall concludes by proposing laryngotomy or tracheotomy, with scarification of the epiglottis and glottis to evacuate the blisters.

In the Appendix to this paper, by Mr. Stanley, we have two additional CASES. The first occurred to Mr. Gillman, of Highgate, in a girl between three and four years old, who had taken scalding water from a tea-kettle. From the first, she vomited violently, and became extremely exhausted. She referred the pain to the stomach as well as she could express it. Oil of almonds in gruel, with two drops of laudanum every four hours, were prescribed, to be followed by a purgative the succeeding morning. When the symptoms becoming worse, and assuming the appearance of croup, leeches were applied to the throat, but without effect, as the little patient died about thirty-eight hours after the accident. On DISSECTION, the mouth, the fauces, the pharynx, and the œsophagus in almost its whole extent, presented the appearances of a scald. The lining of the stomach was a little reddened, and the trachea still more. Mr. Gillman, on reviewing the case, seems disposed to think that his treatment had not been sufficiently decisive.

The next CASE, of a child about three years old, was treated in St. Bartholomew's hospital. It lived twelve hours after the accident, the most prominent symptoms being referable to the brain. We remark, that both in this and in Mr. Gillman's case, the state of the pulse is particularly mentioned, though it certainly can furnish but little certain data in such a case. On DISSECTION, the trachea, œsophagus, and stomach, were of a healthy appearance. The larynx and pharynx were slightly red, and there was a very small quantity of fluid effused between the membranes of the brain. Purgative treatment was adopted, because it did not appear what else could be done. We fear that prescribing in this manner at hap-hazard, is but too common, when the practitioner happens to be non-plussed. The practice, however common, cannot be too strongly reprehended.

The second paper is an account of a CASE of ANEURISM of the axillary artery, in which Mr. Charles Mayo, of Winchester, placed a ligature upon the subclavian artery. The patient was a fisherman, aged 38, who had been generally healthy, till he was attacked with severe rheumatism about six months before the aneurism had been observed, and three before his admission to the hospital at Winchester. The tumour was found to be oblong, corresponding to the course of the artery, and lying below and parallel with the left clavicle. It pulsated so strongly

that the artery along the clavicle could be compressed with great difficulty. The pulse at the wrist was the same as in the sound arm. The night before the operation ℥xviii of blood were taken from the arm, and he had a purgative and an opiate at bed time. After making a transverse incision along the upper edge of the clavicle and another along the edge of the sterno-cleido--mastoideus muscle, the artery was laid bare by removing the cellular tissue by which it was covered. He found considerable difficulty at first in detaching the artery from its connection with the rib, but at length succeeded in passing the ligature, with Desault's elastic needle, and Ramsden's iron instrument. Mr. Mayo tightened the knot till the inner coats of the artery were sensibly divided, and the morbid pulsation in the tumour had ceased. The operation was completed in about twenty minutes. The patient was easy the whole day till towards night, when he felt some pain in the elbow, and an opiate was prescribed, followed by a purgative next morning. Pulsation in the tumour having returned, he was bled to ℥xviii, and as he had severe pain in the arm and elbow, he was ordered forty-five drops of laudanum, and to have his arm embrocated with soap liniment and laudanum. The same plan of treatment was continued with energy, but without success, for he died twelve days after the operation. He often complained of a hot, pricking sensation in the part, and suffered repeated hæmorrhage from the wound. Shivering and other feverish symptoms indicated some internal mischief of an inflammatory nature.

On DISSECTION it was found, that the sac reached from the axilla to the sternum, lying between the clavicle and the three superior ribs, and having several large nerves of the axillary plexus stretching over its middle. It contained about a tea-cup full of recent coagulum, and some large masses of lamellated fibrine. The sternal extremities of the three first ribs were in a great part absorbed. The posterior part of the tumour had penetrated into the chest, and was in contact with the pleura, and it appeared, that recent inflammation had existed here—the origin, perhaps of the feverish symptoms; but whether this was caused by the pressure of the sac, or by the irritating consequences of the operation, seems to be doubtful. Mr. Mayo inclines to ascribe it to the operation alone with the implication of the axillary nerves with the tumour.

The third paper is an account of a successful CASE of BRONCHOTOMY, performed to remove a pebble from the trachea, by Dr. W. J. Hunt, of Dartmouth. A boy, four years old, having several pebbles in his mouth, had a fall by which one of them

was forced into the rima glottidis, and this would have produced immediate suffocation, had it not been fortunately pushed down into the trachea by a young lady who attempted to extract it with her finger. The inconveniency was now only experienced when the stone was, by coughing, forced up into the glottis, where it occasioned convulsions, wheezing, rattling in the throat, and threatening suffocation. The irritation and cough were allayed by the following mixture :—

℞ Muc. gum. acaciæ. ʒjss.
Tinct. Opii. gutt. xx.
Syrup. Simpl. ʒij.
M. ut ft. mistura, cujus capiat cochlaure minimum sæpe, tussi urgente.

The OPERATION was performed by making an incision of two inches and a half long through the integuments near the prominence of the thyroid cartilage. An incision was then made into the trachea, beginning from the first ring under the cricoid cartilage, where Dr. Hunt was fortunate enough to feel the pebble with the point of the knife, and having fixed it with his finger to prevent it being drawn out of reach by an inspiration, it was easily extracted with the forceps by Mr. Budland, his assistant. This precaution was, no doubt, judicious, when the stone was felt, but it would most probably have been expelled from the wound without trouble by the first expiration.—(See *Quart. Journ. For. Med.* iv. 94.)—It may be useful to mention that similar cases are recorded by Louis, Pelletan (in his *Clinique Chirurg.)* Ran, Heister, Verduc, Engel, Bartholin, Zulpius, Hechsteterus, and Schurigius; and as we before mentioned *(Loc. citat.)* the experiments of Favier, in some measure, set the question at rest. Mr. Henry Earle, however, in his judicious remarks appended to Dr. Hunt's paper, mentions two cases of Peletan's, in which the foreign substances, on account of their form, could only be removed by extraction.

It strikes us as a peculiarity which we cannot commend in the after treatment, that Dr. Hunt prescribed the tincture of colchicum so freely, such as—

℞ Mannae, ʒj.
Infus. Sennæ, ʒss.
Tinct. Colchici, gr. *(Qu. gutt.?)* x.
Ft. haustus tertiâ quâque horâ sumend.

And,

℞. Syrup. Rhamni cathart. ʒij.
Infus. Sennæ, ʒij.

Tinct. Colchici, gtt. xxxx. (*Qu.* xxx.)?
Ft. mistura, cujus cap. coch. largum quartis horis,
donec fluxerit alvus.

And,

℞. Tinct. Digitalis.
—— *Colchici*, ā ā gtt. xx.
Muc. gum. Acaciæ et Aquae. ā ā ʒvj.
Syrup. rheados. ʒj.
M. ut ft. mistura, cujus cap. quart. partem quartis horis.

The fourth paper is by Dr. Marcet, on a singular variety of URINE which turned BLACK soon after being discharged. It occurred from birth, in a boy seventeen months old, and apparently healthy. The first change remarked in the urine was a dark purplish hue on the surface, gradually deepening to black, and emitting a strong smell of ammonia. Sometimes this change did not take place, and in that case the urine became rapidly putrid, though when the change did occur it was almost imputrescible: one specimen in the possession of Dr. Marcet has remained quite unchanged in colour or appearance for seven years. When the child became costive, the dark colour was most apparent; but it would at all times be produced by the addition of ammonia. The child was lost sight of after it was about nine months old. Another case of black urine is mentioned by Dr. Marcet as occurring in a young hysterical female, who was cured in two or three months with Peruvian bark and nitrate of silver. The simular cases on record by Lommius and others, may be seen referred to in Ploucquet. Dr. Prout, who analysed the urine, seems to think the black colour owing to a new substance *(Melanic Acid?)* in combination with ammonia.

The fifth paper by Mr. Green, of St. Thomas's hospital, gives an account of the extraction of a living fœtus from a woman killed by violence. The woman was thirty years of age, and in the ninth month of her pregnancy, she was run over by a heavily laden stage coach, expired about twenty minutes after the accident, and Mr. Green performed the Cæsarean section twelve minutes after she died. The child shewed no signs of life till the lungs were artificially inflated; but upon persevering in this for fifty minutes, it opened its eyes. The warm bath and a little brandy were tried as stimulants, but with evident disadvantage, as the breathing became weaker and less regular. It was put to nurse and at first appeared to do well, but it did not continue so. It died thirty hours after the operation.

In the sixth paper, Dr. Marcet gives a CASE of a man who

lived ten years after having swallowed a number of clasp knives. This case has been repeatedly given in publications, for instance in Dr. Elliotson's notes to Blumenbach's physiology, but Dr. Marcet considers all these imperfect. John Cummings, a sailor, in a frolic, swallowed, in 1799, four clasp knives, of which three came away by stool in the course of two days, but the fourth was never observed. He performed a similar foolish prank in 1805, in order to prove the truth of his former feat, swallowing in two days about fourteen knives, which in the course of a month were all discharged by vomiting. In the same year he swallowed no less than seventeen knives, washing them down with grog; the effects produced by which kept him an invalid for four years, when he died in Guy's hospital. In order to dissolve the knives, ("these bodies," as they are clumsily called in the Report,) or to blunt their edges, Dr. Babington and Dr. Curry prescribed the mineral acids, with opium and mucilage, but with what effect cannot be ascertained. Every thing which he vomited or passed by stool was of an inky colour.

On DISSECTION, the cavity of the abdomen was found to be tinged with a black ferruginous colour, particularly about the liver. In the stomach, about thirty or forty fragments of blades, knife-springs, and handles were found, some of them much corroded, and others little changed. The lower part of the œsophagus and the orifice and inferior right extremity of the stomach were thickened, as was also the duodenum. The pylorus was healthy, but the rugæ in the mucous membrane were unusually prominent, with granulated projections from their edges. Like the intestines, it was also tinged with iron. One of the blades was found stretching across the rectum, with one of its extremities actually fixed in the muscular parietes of the pelvis; another had transfixed the colon opposite the left kidney, and projecting into the cavity of the abdomen; but the parts had so closely adapted themselves around the blade, that all communication between the wounded intestines and the cavity of the abdomen was effectually prevented. On examining the bile, it was found to contain a remarkable portion of iron.

The seventh paper, by Mr. South, gives a CASE of PREMATURE PUBERTY. John Harris is now nearly four years old. He was about four months old when the extraordinary developement became remarkable, the pubes becoming at that period covered with strong black, curling hair; the glans protruded from the prepuce, he had frequent seminal emissions, which was seemingly painful; and he grew so heavy and robust, that his legs could not support his weight, and he had to be carried, his tibia

having bent under him. He weighs 64 lbs., stands three feet seven inches high, his occiput is very prominent, and his back is covered with hair like a strong muscular man. The length of the penis, when pendant, is three inches, and about the same in circumference; when erected, it is six inches long and four in circumference.

The eighth paper, communicated by Sir A. Cooper, is by Mr. Dowler, detailing the PRODUCTS of acute INFLAMMATION. This paper is in a great measure theoretical and conjectural. The author objects to the term "coagulable lymph," and tries to show, that it is merely fibrin and serum. The buffy coat of blood, he also thinks is fibrin entangled in a large proportion of serum. His most fanciful view, however, is, that according to the diameter of a blood vessel's orifice, it will pour out serum,—fibrin,—pus, (which he thinks is the nucleus of the red globules)—or pure blood. We observe, that the editor of the Medical Repository claims to have anticipated Mr. Dowler in this. To us, it appears to be nothing more than a closet fancy.

The ninth paper, by Mr. Salmon, gives a CASE of INGUINAL ANEURISM, successfully treated by tying the external iliac artery. Thomas Broad, aged 29, a soldier in the guards, was brought to the hospital with an aneurism in the groin, extending to Poupart's ligament, which had been increasing for the preceding ten months. Mr. Salmon made an incision about three inches and a half long through the integuments, from the spine of the ilium to the base of the tumour. He then divided the aponeurosis of the external oblique muscle to the same extent, and then with a probe-pointed bistoury, divided an inch and a half of the internal oblique and transverse muscles. Having pushed aside the bag of the peritoneum, he was enabled to introduce his finger down so as to feel the external iliac artery beating under it. Being foiled in endeavouring to separate the vessel either with the finger or with the aneurismal needle, he detached it by means of the scalpel, passed a strong ligature around it, and tied it firmly. The pulsation in the tumour immediately ceased, the patient complained of some little pain in the abdomen, which subsided in the evening. The ligature came away in three weeks. The patient was discharged in two months quite healthy.

The tenth paper, by Mr. Broughton, contains observations on the use of CUBEBS in GONORRHŒA. He tried the medicine in *fifty* cases, and almost with uniform success. He exhibited the powder in doses of from half a drachm to two drachms; and

the wine or tincture in doses of from one drachm to half an ounce, twice or three times a day. When it is not found to have any effect in three or four days, it will be proper to discontinue it. It may be advantageously followed by the balsam of copaiba. It seems to possess a power of allaying irritation beyond that of alkalies, or the nitre and gum powder, and also of diminishing the discharge. Over capivy, it seems to hold an advantage, in being admissible in the earliest and worst stages of the severest gonorrhœa, without the inconvenience to the stomach so frequently experienced from full and continued doses of capivy. It is superior to injections in not producing stricture, chordée, &c.; and it is equally speedy in effecting a cure. It requires no change of diet and regimen.

The eleventh paper, by Mr. Shaw, of Great Windmill-street, on PARTIAL PARALYSIS, is the longest communication in the volume, and is founded on the novel doctrines of Mr. C. Bell and the author, concerning the nerves.* They divide the nerves into those which are simple, uniform, symmetrical, and *original;* and those which are irregular, complex, and *superadded;* a division which appears to us most expressively unnatural. Mr. Bell thinks, that when a part or organ has many distinct nerves, it possesses—not a mere accumulation of nervous power—but distinct powers, entering into different combinations, according to the number of its nerves. From this Mr. Shaw concludes, that when one system of nerves is affected, the symptoms are different from those following a disease of the other, and that the two systems are seldom affected at the same time. It follows, he thinks, that there must be two species of paralysis, one affecting the nerves called *original;* and the other, the nerves called *superadded.* For example, in the common cases of hemiplegia or palsy after apoplexy, the muscles paralysed are only those concerned in voluntary actions, which are supplied by original nerves. On the other hand, in partial paralysis of the face, the muscles paralysed are partly those which are employed in respiration, and depending on superadded nerves. Mr. Shaw endeavours to show also, that these two species of paralysis arise from different causes, and require different and often opposite modes of treatment.

In PARTIAL PARALYSIS of the face, there is seldom any affection of the brain, as has hitherto been supposed, the affection

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* See our Review of Mr. Bell's paper, *Quart. Journ.* iv. 142; and Mr. Wallace's objections, *idem*, iv. 294.

generally depending on some injury or disease of the superadded nerve, commonly called the portio dura of the seventh pair, and by Messrs. Bell and Shaw the respiratory nerve of the face. The CASES given to illustrate this are highly worthy of attention. J. Richardson was seized with a severe pain under the ear, and in a short time became delirious, and an abscess formed in the parotid gland and burst under the ear. Since that time, partial paralysis of the respiratory nerve has supervened, and in consequence he cannot speak, smile, laugh, or sneeze, without distortion of the mouth and nose. He cannot whistle, but he can hold a pen in his mouth, and can throw a piece of bread from one side of his mouth to the other, the buccinator muscle not being affected. He was treated as if affected with phrenitis, which fortunately in this case was right; though the next case shows that this would often be erroneous.

A person in the country was attacked with symptoms of paralysis of the face, but was suddenly relieved by the bursting of an abscess in his ear. He went most unnecessarily through the severe ordeal of bleeding, purging, starving, and of having his head shaved and blistered.

A gentleman was seized with a violent pain below the ear, which was quickly followed by paralysis of one side of his face. By the advice of several eminent physicians he was bled, starved, blistered, without benefit, and put upon a course of mercury so violent, that he lost several of his teeth from its operation. He was then recommended to improve his digestion by the blue pill, which proved of no use. He is deaf in the corresponding ear, whence it is probable the trunk of the nerve is diseased where it passes through the temporal bone. The face is much distorted, and the muscles wasted and shrivelled on the paralysed side, and the power over the eyelids is lost, which has caused repeated attacks of ophthalmia.

Garrity, a porter, was attacked 19 years ago with severe pain and discharge from the right ear, which subsequently terminated in partial paralysis of the right side of the face, since when he has not been able to close his right eye, which, from repeated inflammation, has been rendered quite opake. All the muscles of his face subservient to respiration and expression are wasted, particularly the corrugator supercilii and occipito-frontalis, while the temporalis and masseter of the same side are plump and healthy. He never had any medical experiments tried upon him.

Mr. Shaw goes on to show, in a very interesting and luminous manner, how the partial paralysis of the portio dura may be

complicated with epilepsy and other evident diseases of the brain; how it may be confined to a part of the side of the face, in consequence of only certain branches of the portio dura being affected; and how it may be only temporary when caused by cold, in what is expressively called *blight*. Counter-irritants, and leeching or cupping in the course of the inflamed nerve, are the means of cure recommended, but the success of these is doubtful, except in the earlier stage of the complaint. The author is now treating a labouring man who, in consequence of inflammation of the triceps muscle subsequent to dislocation of the shoulder, has lost the power of the extensor muscles of his fingers, though the power of the flexors remains perfect. A blister has proved advantageous.

Mr. Shaw continues his original and accurate observations, by inquiring into the state of the superadded nerves in cases of palsy following apoplexy. This class of nerves is very complicated, their connections supplying the muscles of the pharynx, of the œsophagus, of the organs of speech and the sphincters, which may be paralysed without any palsy of the limbs. But neither these, nor the muscles concerned in the functions of respiration and circulation, are often affected in hemiplegia. When the sphincters, &c. are affected in paralysis, the prognosis is very unfavourable. Dr. Cheyne, of Dublin, gives the CASE of a woman, who, after being attacked with apoplexy and being hemiplegic for two days, was safely delivered of a living child, the secondines being expelled by the action of the uterus without subsequent hæmorrhage.

It has often been remarked from the time of Galen downwards, that the sensation of a paralysed limb often remains perfect. We recollect, that in a case of Darwin's, he supposes, without thinking it necessary to prove it by dissection, that there are certain nerves appropriated solely to the feeling of heat and cold, which may remain healthy when a limb is paralysed. This is perhaps an imperfect anticipation of Mr. Shaw's ingenious doctrine; as he acknowledges Galen's explanation of the fact to be, though on his part it was only theoretical. The truth is, that there are two packets of fibres included in the single nervous cord which runs from the spinal marrow, though arising from different parts of it. If one of those parts of the spinal marrow, or the nerve arising from it become injured or diseased, there will ensue either a loss of motion or of sensation according to circumstances. This fact Mr. C. Bell proved by experiment.

The author deduces from these remarks the practical rule of

directing the means of cure to the origin or along the course of the affected nerve, according as the affection shall appear to be total or partial. We wish Mr. Shaw and Mr. Bell every success in the prosecution of these highly interesting, and, in a great measure, original inquiries.

The twelfth paper, by Dr. Gooch, of Bartholomew's hospital, is on the important practical subject of UTERINE HÆMORRHAGE, and possesses all the characteristics of his cleverness and graphic style. Even when the uterus feels contracted in the usual degree, alarming sympoms may sometimes occur:—1. When the effect of the hæmorrhage depends as much on the patient's liability to faint as the quantity of blood lost or the rapidity with which it floods; and 2. when the circulation is increased so much as not to be resisted by the ordinary contraction of the uterus.

Many women are exceedingly liable to syncope, or to the sensation of sinking, so accurately described by Dr. M. Hall; and, when even a moderate hæmorrhage occurs in such constitutions, may become dangerous and fatal. In a CASE which occurred to Dr. Gooch of a short and easy labour, the syncope appeared about ten minutes after the separation of the placenta, and repeated revivals and attacks ensued. This lady was very subject to faint. In another CASE, the syncope appeared in consequence of previous exhaustion from a severe protracted labour. He brought away, with the hand, a coagulum of blood, when the uterus shut like a spring, though the symptoms continued alarming. A dessert spoonful of Hoffman's ether, with fifty drops of laudanum, proved useful and the patient revived.

In the excited state of the circulation, the ordinary contraction of the uterus was quite inefficient, in a CASE in which the lady before labour was flushed, and had a very quick full pulse; she was enjoined abstinence from meat, wine, and warm drinks, and had cooling purgatives. She was affected with one of the most alarming hæmorrhages which Dr. Gooch ever witnessed. He subdued it by means of cold. In her following confinement, exactly similar symptoms occurred in a very alarming degree, which were with difficulty removed by the same means. To obviate so dreadful an occurrence in her following labour, she was put upon low diet, with salts and senna twice a week, and a scruple of nitre three times a day. This kept her skin cool and her pulse low, till two days previous to her labour, when the former symptoms of flushing, heat, and quick pulse came on. The flooding was in this instance much less, and was easily subduced. In preparing for a fourth confinement, in addition to these precautions, a small quantity of blood was twice taken

from the arm: no flooding followed her delivery. Dr. Gooch mentions another CASE, in which a cordial given during labour produced similar alarming consequences. He refers for illustration of the fact to M. Boer, of Vienna (*Treat. on Midwifery, Aphor. IV.*). When pounded ice spread over the belly was ineffectual, Dr. Gooch found advantage in pouring ice-cold water on the abdomen with a shock, from a ewer held at the distance of several feet above the bed. La Roux's method of plugging with handkerchiefs soaked in vinegar, though recommended by the high authority of Rigby (*See Quart. Journ. For. Med. p. 272, above*) was not found effectual by Dr. Gooch. The editor of the Intelligencer, in a note on this passage, recommends external pressure as a good auxilary to the plan, and we agree with him. The whole paper is highly creditable to the able author.

The thirteenth paper, by Mr. Dunn, an enterprising surgeon of Scarborough, gives two CASES of COMPOUND FRACTURES, in which the limbs were saved by removing *large* portions from the middle of the cylindrical bones, and one CASE of simple fracture in which a projecting portion of bone was sawn off with equal success. The first case, in which after his operation the two portions of the tibia could not be brought within two inches of each other, indicates, we think, that the *large* portion of bone removed, was too large; for though the space between, filled up with solid matter, the limb remained permanently an inch shorter than the other. The other cases are of less importance.

The fourteenth paper, by Mr. Pout, detailing a fatal CASE of UMBILICAL HÆMORRHAGE, which occurred in a newly born infant,—the third fatal case in the same family, from a similar cause. The funis came away on the sixth day, and the hæmorrhage commenced on the eighth. None of the means tried, such as pressure, sticking plaster, bandaging were of any avail. Mr. Pout intends to cut down on the artery and tie it if he again meet with a similar case. We may ask why he did not do so in this, particularly as he knew that two fatal instances had already occurred in defiance of the less efficient means?

In the fifteenth paper, Mr. S. Gilder gives a CASE of MEASLES complicated with VACCINE DISEASE, in which the measles appeared on the sixth day after vaccination. The two diseases ran their usual course without any apparent reciprocal influence. That the vaccination had been genuine was proved by vaccinating another child from the pustule, which went through the stages properly.

In the sixteenth paper, Mr. Henry Earle, of St. Bartholomew's, gives a very interesting account of an unsuccessful at-

tempt to unite fractured bones by setons and the application of caustic potass. Mr. Earle's independent motives in publishing his unsuccessful cases is highly praiseworthy; if we had more statements of this kind, surgery, we are convinced, would more rapidly improve. Mr. Earle cut down to the bone, and passed the seton between the non-united portions. His failures appear to have taken place more in consequence of deranged health in the patients, than from any other cause. One of the fractures was caused by the slight effort in lifting a tea-pot. The patient, a female, was worn down by syphilis and the action of mercury. The case must have been clearly hopeless from the first.

In the seventeenth paper, a CASE of large NAEVUS MATERNUS of the head, cured by tying the carotid artery, is given by M. Arenat, of St. Petersburgh. A man, who had several naevi on different parts of the body, received a blow on one of them, on the right temple, and it increased so alarmingly immediately after the injury, that it was judged proper to tie up the carotid artery. This was done an inch and a half above the clavicle, and two ligatures placed round it, at the distance of half an inch. During the operation, the tumours burst and discharged about eight pounds of blood. On the following day, it being found nearly empty of blood, a portion of skin was cut away, and twelve small arteries were secured. The wounds healed speedily and successfully.

In the eighteenth paper, Mr. Wardrop gives the CASE of a WOUNDED NERVE of the thumb, in which severe symptoms were relieved by division of the nerve. The wound was received from a gun-flint, and readily healed; but the patient having indulged in full living, the pain returned severely, accompanied with considerable constitutional irritation—the pulse being frequent and tense, the face flushed, and the tongue white and flabby. Copious general bleeding with purgatives, at first relieved the pain. This, however, returned when his mind was excited, or when he indulged in animal food, at the same time he became emaciated and weak. The nerve was therefore divided. The pain immediately ceased, and the thumb now remains only a little numb. He concludes, that the partial division of a nerve is often followed by the most serious mischief, whilst, that in order to subdue such symptoms, the complete division of the nerve, above the injury, may be adopted as a safe and effectual means of relief.

Mr. Charles Bell's paper on CARCINOMA MAMMÆ, we shall take up in a separate article, as soon as it comes before us in a complete form.

Sir Astley Cooper, in the twentieth paper, gives several CASES, in which the FEMALE URETHRA was successfully DILATED. A new instrument, invented for this purpose, to obviate the inconveniences of the sponge tent, is made by Mr. Weiss, of the Strand, consisting of two hollow blades like those of a straight forceps, between which a stile is worked by means of a screw and handle, and the blades, separated. In the CASE of a lady, the instrument was introduced at eight in the morning and removed at four o'clock in the afternoon, at which time the urethra was sufficiently dilated to admit the finger. A stone was then extracted from the bladder by means of the forceps, and the case did well. In another CASE, a lady, who had been in the practice of introducing a catheter, accidentally broke off a piece of it, which remained in the bladder. The urethra was dilated in a few minutes and the fragment extracted. Two similar cases are given by Mr. Chapman and Mr. Birt, in which the dilatation was accomplished by other means.

The last paper is by Mr. Vincent of St. Bartholomew's, giving a CASE of a large glandular TUMOUR, which was removed from the neck of a boy, six years old. It began about fifteen months previous to the operation like a slightly enlarged gland, which encreased till it occupied the whole of the right side of the neck from the ear to the clavicle, and from the edge of the trapezius to the trachea. The integuments and the mastoid muscle which lay over it were removed and it was divided into many portions and drawn out. One portion passed behind the internal jugular vein and another was in contact with the pleura, which was also cautiously detached. There was little hæmorrhage, and only one small artery had to be taken up, but some nerves of importance were wounded, and the accessory and some branches of the cervical plexus were divided. Erysipelas supervened, but the wound healed, and the child was in five weeks dismissed, cured. He still, however, had cough, dyspnœa, and nocturnal perspirations. He was afterwards seized with measles, which proved fatal. The left lobe of the lungs was completely destroyed, and its place occupied with about five ounces of pus. The right lobe was inflamed, and there were several adhesions of the pleura. The mesenteric glands were healthy, but two of the cervical glands had begun to enlarge.

Dr. Lucas on the Principles of Inflammation and Fever *.

All the parts of the living body have certain actions to perform, and are endowed with powers corresponding to their actions. If a part, from any cause, assumes more than its healthy action, its power is exhausted, and debility is the consequence. Almost all disease called inflammatory, consists in the first instance of increased action; but as the parts contiguous to the inflamed one are not excited in the same proportion, neither is their power exhausted to the same extent, as that a loss of balance is produced between the power and action of the inflamed, and the adjacent parts. But loss of power accompanying increased action, reduces the action of the inflamed part below that of the contiguous part; so that the disease is maintained by this loss of balance as well as the former. The inflammatory process then consists of various stages, each characterised by phenomena of its own; hence authors have been at variance as to what stages the term inflammation strictly applies. We think, to them all. From the moment the action of a part is increased, inflammation is begun; and the term is applicable at all the subsequent stages, whether the complaint terminates in resolution, or runs into gangrene. In some stages, there is augmented, in others, diminished action; the various systems of the inflamed part are differently affected at different stages; so that it must be absurd to limit inflammation to the condition of these parts at one stage only. But however absurd, it is too much the practice with the theorists who speculate upon this subject.

But farther, the actions of a part are carried on, or manifest themselves by the performance of certain functions necessary to the support of the part individually, or to answer some purpose in the economy. These functions are intimately related, so that you cannot disturb one without disarranging the whole. As healthy action cannot exist by the agency of one function alone, so neither can morbid action. Thus inflammatory action is not exclusively confined to the vascular system, nor to any separate

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* On the Principles of Inflammation and Fever, by C. E. Lucas, M.D. pp. 304. 1822.

system or function; it extends to all the functions of the affected part; so that to attempt a satisfactory exposition of inflammation by adverting to the morbid condition of one function only, is next to being as absurd as limiting our account of it to one particular period of the disorder. Dr. Lucas we are afraid, has fallen into both of these errors. His hypothesis is too much confined to the arterial system, and to that stage of the disease in which diminished action has taken place. On this head, however, he is any thing but precise.

In his preface, he does not claim the merit of bringing forward new facts; he thinks it better to give sound views of pathology on the basis of those already known. Upon this head we differ entirely from him. It is owing to the want of facts, not of ingenuity to draw deductions from them, that pathology is still so lamentably defective. Theories of inflammation are valueless, apart from the facts upon which they are founded.

Most of our readers must be familiar with the microscopic observations long since published by Dr. W. Philip, and since confirmed by Dr. Hastings, and even in some measure by Dr. Thomson. It is upon these facts, that Dr. L. founds his theory. He agrees with Philip and Hastings that inflammation does not exist during the increased action of vessels which succeeds to the application of a stimulus. Dr. Thomson, however, says, that inflammation is sometimes established during the stage of increased action. Although we conceive this dispute to be chiefly verbal, we agree with the account given by Dr. Thompson, for reasons which shall be subsequently given. The hypothesis of fever rests upon the same foundation with that of inflammation,—a loss of balance between the capillaries and contiguous vessels. In inflammation, the capillaries are dilated, and in fever the heart is excited; but it may also be excited in strong inflammation as well as the contiguous vessels.

In the outset of his work, Dr. L. assents to the distinction which has been made between nervous and sensorial power—a distinction for which we perceive no just foundation. There are no facts which prove the nerves to have any power independent of the sensorium, including in this term, the power resident in the brain and spinal marrow. None of the functions of sensation, secretion, or motion, can be fulfilled in an organ to which all communication with the sensorium is destroyed. Dr. Philip in his work on the Laws of the Vital Functions, conceives that even muscles have a peculiar power independent of the nerves. We think with Dr. L. that this opinion is groundless. Stimuli might corrugate a muscle destitute of nervous power, but could

not possibly cause its fibres to contract. Dr. Philip indeed has shewn that the heart and blood vessels act for some time after their communications with the sensorium are broken off: we grant the fact, but we should deny the conclusion. The energy given to these organs by the sensorium is not exhausted the instant its further supply ceases; and it is only while the last spark of it lingers there, that they can perform one movement.

It is inexplicable how the voluntary movements, when protracted, induce fatigue, and require an interval of rest for their renovation, while those functions called vital, act without ceasing. All that we know is, that perhaps the vital functions have their sensorial power modified by the ganglions. While the organs of these functions are not overloaded, there is no sense of fatigue or consciousness of their operations; but task them beyond their power, and the increased demand which they make on the sensorium produces general languors and fatigue. Digestion, for example, goes on without the feeling of heaviness, when the stomach is not overloaded; but once task it, and the exhaustion of the sensorial power brings on drowsiness. Respiration is less dependant upon the ganglions perhaps, than the other vital functions, but its nervous energy is also modified by them, so that it is not, as Dr. L. and Dr. Philip think, a voluntary function:—so far from being so, it follows the application of its proper stimulus as necessarily as digestion follows the application of food to the internal coat of the stomach; we cannot resist or ward off this stimulation, neither can we prevent the respiratory organs from obeying its impulse; and this being the constant and uniform effect of this stimulus at all times and in all circumstances, we cannot help thinking that to call the function voluntary, is, to say the least of it, a misnomer. We can make the acts of the function objects of consciousness when we *will* to do so, but we cannot resist the performance of these acts.

The nervous system exerts an extensive influence over the vascular, giving to the heart and blood vessels their capacity of being acted upon by stimuli. But the circulation is carried on by the elasticity of the blood vessels as well as by their irritability. In the great arteries especially, Dr. L. has satisfactorily proved it to be the preponderating quality, while irritability prevails almost exclusively in the capillaries. When he speaks, however, of the muscular power of the arteries being exhausted by excitement, requiring an interval of rest for its renovation, we do not understand him. The heart is allowed to be muscular; but in what does its interval of rest consist after the ex-

citement of fever? In admitting muscularity to the arteries, we must not blind ourselves to the fact that it differs from that of ordinary muscle, and in nothing more than its exhausted irritability not requiring rest for its restoration. In many cases, recovering irritability may be simultaneous with augmented action. The action of the blood vessels being incessant, so must also their demand upon the nervous energy be.

Our limits do not permit us to give very detailed accounts of our author's views regarding the actions of the blood vessels. These constitute by far the most valuable part of the work, and merit, as well as his views of the nervous system, careful examination. He thinks that the capillaries depend chiefly upon the nervous power for their action; and that in a state of health they offer a certain resistance to the admission of the blood, which, together with the preponderating influence of the heart, maintains the larger arteries in a state of forced distention. This is necessary to bring their elastic property into play. We are not satisfied that this power of the heart, and continued pressure kept up upon their contents by the larger arteries, are not very active agents in the circulation of the extreme vessels. Unusual resistance, however, of the extreme vessels, or augmented action of the heart, are equally capable of producing increased fulness of the arterial system. But as increased resistance must be followed by loss of power, and as the capillaries are more dilatable than the larger vessels, the plethora will be proportionally greater in them. On the same principle weakened action of the heart will cause accumulation in the veins, as is the case in the formative stage of fever.

The blood being once thrown into the capillaries, they will be roused in the first instance to increased action, and as there can be no reflux relief will be obtained, partly by the blood being transmitted more freely into the veins, and partly by increased effusion from the exhalants. The fact of increased discharge in such circumstances is undoubted, but doubt may exist as to whether exhalants (giving passage to the thinner portions of the blood unchanged,) open upon any of the surfaces of the body. Increased effusion, we are told, may occur from loss of tone in the extreme vessels, as well as from increased plethora. The exhalants are subordinate to the capillaries, and complete relaxation of them gives rise to the effusion of debility. Venous congestion too about the liver and right side of the heart and lungs, preventing the free return of the blood, occasions effusions into the great cavities of the body. Effusion, whether healthy or morbid, depends upon the relation between the momentum of

the blood and the resistance of the extreme vessels. The whole account of this subject by Dr. L. is ingenious, but some of the facts upon which he founds his speculations require to be proved. The idea of vessels called exhalants, for example, opening upon the surfaces of the body and transmitting blood, or its thinner parts unchanged either in health or in disease, seems to us to require proof. In most cases we should suppose there was increased secretion, not direct effusion. The stimulus of more blood than usual in the extreme vessels may excite increased secretion, so that there is no necessity to resort to the explanation, that the exhalants ever pour out the thinner parts of the blood unchanged. We believe the perspiration is as much a secretion as the urine. The fact that real blood, in congestions of the vena portæ, gets through the pori biliani, and passes into the duodenum, is doubted by many. We rather believe it is a crude imperfectly prepared bile which is so transmitted. We are told that the loss of tone in the extreme vessels, in bronchitis on the approach of death, gives rise to so abundant an effusion, that it often proves the immediate agent producing death. This account is not more satisfactory to us than the old one, that from increasing debility, the patient becomes unable to cough up the matter as it is secreted, thus allowing it to accumulate. We are afraid, that Dr. L. takes up some of these notions, because they agree better than the older ones with his views of inflammation.

Inflammation, he defines "to consist in an impeded or obstructed state of the capillaries, with increased action of the contiguous vessels." The definition, then, contains the enunciation of two supposed facts, the most general in inflammation. If these facts agree with other known facts, if they be consistent with one another, and with the condition of the other vessels, we are to suppose, that the examination of the phenomena has been cautiously made, and that the general statement is correct. If, on the contrary, they are contradictory and insufficient, we presume that the speculations of the author must rest on an unsure foundation. There are two theories at present maintained regarding the action of the capillaries in an inflamed part; one, that it is increased; the other, that it is weakened. Generally speaking, Dr. L. advocates the latter doctrine. There are many eminent men in the profession, however, who adhere to the old doctrine of increased action; and we would ask, are increased heat, pain, and secretion, like the usual effects of debility? Is the formation and growth of new parts, in which an analogous state of the blood vessels takes place, a process of debility? Does nature repair a breach in the solids by exhausting the power of the contiguous parts? There is yet much to

be explained before the new doctrines can be admitted in their fullest extent. Every one must think highly of the ingenuity of those who have applied the microscope to the investigation of the vascular movements; but we must beware of attaching more importance to their discoveries, than to the more obvious phenomena which the unassisted senses easily detect. No faith can be attached to microscopic observations which contradict the experience of the unaided senses. It has been long known that in inflammation there was an afflux of blood to the part affected; and we are still led to this conclusion, as irresistibly by the heightened colour of the part, as by viewing the vessels through the microscope. The secrets of vitality, we fear, can never be discovered by mechanical contrivances.

There are some points regarding his own hypothesis which Dr. Lucas has not very clear notions about. He either is at a loss to decide whether the action of the capillaries is increased or diminished; or, like ourselves, he is not sure of the meaning of the terms which he employs. If inflammation consist of a loss of balance between the action of the capillaries and contiguous vessels, it follows, that if the action of the latter is increased that of the former must be diminished, and that Dr. L. at one time thinks so is apparent, from his stating that he cannot withhold his assent to the conclusion deduced by Dr. Hastings, that inflammation consists in a weakened action of the capillaries, &c. But we have only to follow Dr. L. a few paragraphs farther, till he comes to treat of the more obvious phenomena of inflammation, namely, swelling, redness, heat, and pain, when he says these symptoms "so obviously depend on the distention and *increased* action of the capillaries as to need no illustration." Not contented with so stating the fact, he goes on to refine upon it, although in contradiction to the general tenor of his opinions on the subject. "As the swelling and redness of the part have been found to depend on the distention of the capillaries, so the heat and pain, particularly the former, will depend more on their increased action." In speaking of the action of sedatives, however, and elsewhere, he distinctly maintains that the pain depends chiefly on distention. But what are we to understand by the words *increased action of the contiguous vessels?* Dr. Philip defines inflammation to consist in debility of the capillaries *followed by an increased action of the larger arteries*. Dr. L. has not improved upon this definition. Inflammation often embraces sufficient extent of parts to have within its sphere *larger vessels*, using the term in contradistinction to the capillaries. Is the action of these vessels augmented? Unnatural distention and engorgement cause weakened action in the capillaries, and

Dr. L. confesses that obstruction of the latter produces accumulation of blood in the vessels immediately before them. The action of these vessels ought, therefore, to be diminished also. But nature is not so precise in the formation of the blood vessels, that to this one you shall affix the term capillary, and to that, artery. Anatomy teaches, that there is a regular gradation of vessels from the aorta down to the minutest capillary; there is not that broad line of distinction between capillaries and other vessels which Dr. Lucas's Theory or Bichât's System leads us to suppose. These vessels will be obstructed according as they approximate to capillaries, but their action will be increased according as they resemble the larger arteries; their condition, therefore, contradicts the hypothesis, that obstruction necessarily produces diminished action.

Each part of the body is supplied with vital power, proportioned to the functions which it has to perform. But we are taught by Dr. L. that increase of action forced upon any vessel exhausts this power, so that the action falls as much below par, as it previously exceeded it. Power is recovered during this diminished action, and the lost balance of action is restored, unless the distention, under the loss of power, oppose a barrier which cannot be overcome. In that case, inflammation is established. On this principle, we see, there is no inflammation during the stage of increased action, because there is as yet no loss of power, nor consequent obstruction. At what precise point of the morbid process then, does this loss of power begin to take place? Does it not correspond in time and degree with the increase of action? We confess we think so; for if not, increase of action has past its acme before loss of power has begun. But we know, that the decline of action is owing to want of power; we have here, therefore, the absurdity of supposing, that an effect is produced prior to the existence of its cause. As loss of power is commensurate with increase of action, inflammation must be established from the very commencement of increased action; and if dilatation be the effect of loss of power, it must also be coëval with increase of action. This accords with the fact, that increased redness is one of the first phenomena of inflammation; but it disagrees with the microscopic observations of Thomson, Philip, and Hastings, especially the two latter. The first part of the inflammatory process, according to the new school, is an impeded or obstructed state of the capillaries. We have said, that we think, there is no set of vessels carrying red blood different from the extreme arterial and venous branches. The arterial capillaries carry blood from the heart; the venous, bring it towards the heart. Does

the obstruction relate to both these sets of vessels, or only to one? If to the arterial only, then there can be no obstruction in the venous, because the blood will be transmitted to these last more slowly than in health. The reverse of this will be the case, if the obstruction is in the venous; the retardation to the flow of blood will then extend to the minute arteries. But how comes obstruction to take place in the venous capillaries, if there be increased action of the contiguous veins? It is undeniable, that the veins have at least some share in propelling the blood. Now, as increased action of the contiguous arteries will have the effect of sending more blood into the capillaries, so increased action of the contiguous veins will have the effect of withdrawing more blood from the capillaries. Increased flow of blood in the veins must always be the effect of increased action of the heart and arteries. Dr. Lucas objects to Dr. Hasting's theory, because it does not include the increased action of the contiguous vessels. Dr. Philip recognises it; but, as is observed by Dr. Lucas, his account of the resolution of inflammation is not free from objection. He supposes, that the larger arteries are weakened by their preternatural action, so as to allow the capillaries to be again in due proportion to the vis a tergo. But if the capillaries are so much weakened as to be unable to resist the vis a tergo, how comes the increase of this vis a tergo, implied in the preternatural action of the larger vessels, to resolve the complaint? Obstruction alone, Dr. L. observes, does not constitute inflammation, though it is apt to end in it; neither, says he, does increased action, because in that case the natural functions of a part only are increased. We are not satisfied with his reasonings on this head, though they also rest on microscopic experiments. Is the increased secretion from the mucous lining of the bronchia in inflammation, not an increase of the natural function? Are not almost all the effects of moderate inflammations but an increase of the natural functions? Indeed we presume to think, that the truth of the above doctrine is nearly confined to the web of a frog's foot. But such are the views, which Dr. Lucas tells us, he was led to adopt of inflammation, by reflecting on the inconsistencies of Mr. J. Hunter's theory. "Nothing," says he in a note, "can be more inconsistent or defective than the theory of the celebrated Mr. Hunter."—That Mr. Hunter's hypothesis is not faultless we allow; but that *something* can be more inconsistent and defective we think Dr. Lucas's own theory affords abundant proof.

There are doubtless cases, where inflammation depends upon diminished action, such as when it is caused by frost-bite. The effect of cold is to exhaust power without increasing action; the contiguous parts, therefore, force more action upon a part,

the power of which is so exhausted, than it can maintain; the *inflammatio debilis* of some authors is the consequence. The *inflammatio valida* may terminate in this, when power is so completely exhausted, that the action of a part gets below that of the adjacent parts; inflammations ending in mortification are proofs of this. Though Dr. Lucas's theory is not quite satisfactory to us, it is so much so to himself, that he asserts it will apply to every form of the disorder, whether external or internal, or by whatever cause, or in whatever way produced. We durst not say so much for any theory. It is under a certain proviso, however, that Dr. L. says so much for his hypothesis:—he is to be allowed to call in *a morbid condition of the fluids* to his assistance when phenomena prove stubborn, and refuse readily to agree with his views. We have seen, that he denies inflammation to have begun when the function of a part is merely increased; the condition of the part, he says, has not passed the bounds of simple irritation. But inflammation, or a combination of congestion with increased action (is it the congested vessels that have increased action?) has a natural tendency to relief by effusion, and this effusion will consist either of *such fluids as the vessels are naturally destined to throw out by secretion*, of some unnatural or modified secretion, or of the blood itself. Now if increase of the natural fluids by secretion be not increase of function, we know not what is. If an effusion of synovia takes place into a joint, will Dr. L. maintain that the membrane has not passed the bounds of simple irritation? Is the function suspended or changed only as he elsewhere asserts it generally to be in inflammation? Again, he maintains that dropsy and hemorrhage are nearly allied to inflammation, because in the former there is an effusion of some unnatural or modified *secretion;* in the latter, effusion of the blood itself. It appears to us, that Dr L. is not aware of the vast difference between effusion and secretion. If dropsy consist in an unnatural or modified secretion, an active state of the extreme vessels is necessary to its production, while hemorrhage, according to Dr. L. is direct effusion from loss of tone in the exhalants. If these diseases frequently depend upon an inflammatory state of the system, they at least are essentially different in themselves. But we are not prepared to agree with Dr. L. that hemorrhage is effusion of blood, simply from relaxation of the exhalants. It is not so in every case, and when it is so, it is the only instance in which relief happens in inflammation from the escape of a portion of the contents of the blood vessels unchanged; and therefore the only instance in which it is present with loss of tone in the extreme vessels, as in other instances, according to Dr. Lucas's own words, there is either increased secretion of the natural fluids, or of unnatural and modified secretions, both

of which necessarily lead us to suppose a state of increased tone and energy of the extreme vessels. We have stated our doubts as to whether the vessels carrying blood communicate directly with those which open upon the various surfaces of the body. If blood in inflammation, passed in this way, the loss of tone must be greater than it is even in death; for our finest injections never come out upon these surfaces when there has been no disease or destruction of their continuity.

After mentioning those exciting causes which modify inflammation, he comes to speak of the morbid changes of the fluids, which give a new stimulus to the vessels, without producing a change in their action specifically different from that of common inflammation. From this he deduces the important practical fact, so apt to be overlooked, of directing our attention, in the first instance, chiefly to the degree of inflammation, rather than to its specific character. Venereal and gouty inflammations, he adduces as examples. He argues also, very judiciously, that as the fluids are prepared by the action of the solids, their healthy condition must depend on the integrity of function of the latter. If the functions languish, a morbid state of the fluids must be the consequence. Many inflammations arise from this cause. One of the characteristics of venereal inflammation, he says, is that it becomes less virulent at each successive stage, as it advances towards the central parts of the system, thus obviously tending to its own cure. This is contrary to the common opinion, and we think contrary to fact. Lues in the frontal bone is as virulent as a primary sore, and as to the disease tending to its own cure, it never does, unless checked by remedies. The plan of treatment Dr. L. recommends is admirable; to pay strict attention, to subdue inflammation in the first instance, and to give mercury in alterative doses. It is curious sometimes to observe how men attempt to disguise their ignorance, by attributing phenomena to unknown causes. There is some *peculiar acrimony* afloat in the system, says Dr. L. which operates as a morbid stimulus, producing the specific inflammation of gout. He mentions as the result of his observations, that the eau médicinale, and other gout remedies of the day, though they procure temporary relief to the disorder, do so at the expense of more frequent visits of it. Although the inflammation is cured, the morbid matter is not expelled; our treatment therefore should be directed to moderate the inflammation only; and we are not to allow it to get well too fast. In short, we are to be civil, and allow time to the morbid acrimony to make a decent retreat! We dislike treatment founded on hypothesis. The moderate use of antimony, opium, and colchicum is recom-

mended during the fit, with warm local applications when the inflammation is deep, and cool air and tepid lotions when it is more external. Topical bleeding is useful; but there can be no permanent cure, except from temperance and exercise.

There is nothing peculiar in the nature of rheumatic inflammation, except that it affects those structures chiefly, which are supplied with white vessels, as the ligamentous expansions about the joints. The brain, pleura, and pericardium are seldom affected except from translation. Exposure to cold, when the body is heated, or after fatigue, constricts the extreme vessels, and drives the blood upon the internal vessels. But reaction of the heart and arteries taking place, the blood is driven into the white vessels of those structures usually the seat of rheumatism. But increased action tends to its own exhaustion, so that the obstructed vessels cease to be urged; they recover their powers of resistance; and the equilibrium of the circulation is restored. If, during the cold stage, the warm bath be prescribed, and full doses of James's powder, Dr. Lucas thinks the formation of the disease may be altogether prevented. If not cut short, strict antiphlogistic treatment will be required. We ought to make a free bleeding in the first instance, and to have the bowels well cleared out. A combination of calomel, antimony, and opium is then to be administered, at short intervals, until the mouth become slightly sore. We are happy to add our testimony to that of Dr. L. in favour of this combination, which we have repeatedly seen cure rheumatism in all its forms, when bleeding and other remedies had failed. We know no remedy on which we could place so much dependance in this disorder. Chronic rheumatism, our author considers a local complaint, the constitution being affected secondarily. The violence of the pain he attributes to inflammation of the neurilema, which constitutes a strong resemblance between chronic rheumatism and neuralgia. The theca vertebralis is occasionally the seat of inflammation, which gives rise to severe pains in the various parts to which the nerves are sent. Such affections demand more attention than is usually bestowed on them. Pressure upon the spine at the affected part is the best mode of detecting these affections; there is usually great tenderness of the spine; and the pressure often aggravates the pain at the extremities of the nerves. Those postures of the body too, which tend to throw the weight of the trunk upon the spine, increase the pain and uneasiness. For inflammatory affections of the nerves, large local bleedings, sudorifics, and sedatives are advised. A mild mercurial course is often successful when other means fail. When attended with foul tongue and disordered evacuations, a combination of stra-

monium, blue pill, and cathartic extract, is of great service. Bark and arsenic are only useful when the complaint is of a distinctly intermitting character. In chronic rheumatism of the joints, Dr. L. speaks favourably of Dr. Balfour's plan of cure, by concussion and compression.

We think Dr. Lucas's views regarding scrofula are good. He insists, and we think properly, on the mental discipline of young scrofulous subjects being better regulated than it is. In phthisical constitutions he speaks highly of ablutions with heated sea water, vinegar, vinegar and cold water, followed by frictions, first of the chest, and extending gradually to the rest of the body as the system is strengthened. Erysipelas he considers a *reflected inflammation of a weak character*. The skin is the counterpoise to the central organs, both vascular and nervous; and in irritable habits, any cause disturbing the relations between these systems may cause an attack of erysipelas. This complaint always evinces itself by more or less of cerebral disturbance, which is greatest immediately before the inflammation appears; and in cases arising from gastric irritation, it often amounts to a sub-apoplectic state, as is evinced by great lethargy, insensibility, and irregular pulse. When suppuration occurs in this complaint, we ought to puncture as soon as matter can be detected; and to use compression by means of bandages, to prevent the matter from burrowing, which it is apt to do, and to cause extensive sloughing of the integuments.

The general indications of cure in inflammation, which Dr. L. adopts from Dr. Philip, are, to lessen the contents of the morbidly increased vessels, or, to excite the vessels to expel them. The latter indication rests upon the theory of weakened action in the capillaries, and, in our opinion, is as erroneous as any maxim so general can be. We scarcely indeed know a case of inflammation, where proceeding strictly upon this principle, would not be productive of bad consequences. A good practitioner seldom applies his stimuli directly to the inflamed part, but to some part more or less remote. Local, seems a greater favourite with our author than general, blood-letting. The latter ought never to be used as a derivative, but simply to diminish the vis a tergo. Our readers will see also, that his objections to general blood-letting are the result, in some degree, of the preconceived theory. Rather than bleed from the arm, says he, for the mere purpose of derivation, intercept the supply of blood from the heart by means of ligatures round the limbs! The vapour bath, he speaks praisingly of, in violent deep-seated inflammation; and he thinks, that combined with the plan of putting the whole or a part of the patient's body into the exhausted receiver of an

air pump, we might supersede entirely the necessity of blood-letting! He is an advocate for the continental plan of changing the determination of blood by the application of a few leeches to a part remote from the one affected—to the anus for example, in some abdominal affections. We believe Dr. L. has overlooked the fact, that our continental neighbours adopt this plan only, when they conceive the new disease to be vicarious of some suppressed habitual discharge.

Almost all remedies are considered by Dr. Lucas in the light of counter-irritants. These he divides into two kinds, those that simply counter-irritate, and those which combine this power with evacuation. His theory of their action is derived from the effects of stimuli upon the web of a frog's foot. The experiments of Dr. Hastings prove, that when obstruction and dilatation of the vessels have been produced by one stimulus, the application of another stimulus causes the vessels to contract, and to assume their healthy action. It may be very well to apply stimuli directly to inflamed vessels in a frog, but we must be cautious how we adopt any such rash practice in the human body. In almost all cases, we must premise depletion; in very few, indeed, even then, are direct stimuli useful, and this opinion, we believe, is gaining ground daily. We use stimulants chiefly as counter-irritants, and so much is this now the case, that some of our best surgeons, in internal inflammations of the joints, prefer applying blisters at some small distance from the joint rather than to its surface, although even in that case their use is as a counter-irritant. In inflammations of the eye, it was too much the custom, even before a theory of the practice was found out, to use stimulating collyria in the very earliest stages of the disease; judicious surgeons now seldom use them, and then only such as are mild, and when all active inflammation has been subdued. Any application which we use directly to an inflamed part, ought to be of the mildest soothing nature; there is nothing better, we believe, than simply cold or tepid water. It is only in those cases where the power of a part is so completely exhausted, that its action has fallen below that of the contiguous parts, that we apply strong stimulants; camphorated alcohol, turpentine, and so forth, to parts which approach to a state of gangrene—a mixture of spirits and lime water, for instance, to those parts, in debilitating diseases, which threaten to mortify from being subjected long to pressure. A proper degree of attention to the cases which require the application of direct stimulants, and of those which require counter-irritants is of much practical importance. We are often acting by counter

irritation, when we suppose we are stimulating directly, and we are afraid Dr. L. has overlooked this fact.

Our author considers purgatives, we think, too much in the light of counter-irritants. To us it appears, that with the exception of affections of the head and spine, we employ them almost exclusively as evacuants; and that, in ordinary cases, the less irritation which they produce the better. It is surely generalizing too much to class them under the head of counter-irritants. High praise is bestowed on the tartras antimonii in severe cerebral affections; as there is great torpor of the stomach, it ought to be given in larger doses than usual, and to be repeated until free vomiting is produced. In this way, we evacuate the stomach, restore the lost balance of the capillary circulation, and establish a new action incompatible with the old one. Dr. L. recommends this practice from experience, otherwise we should strongly object to it. We have seen good effects in such cases, from small doses of the tartras antimonii in solution with some of the neutral salts, repeated so as to occasion some degree of nausea, perspiration, and a free state of the bowels. In small repeated doses, antimonials have the effect of checking colliquative and other debilitating sweats. Tartar emetic is found also to excite the secretory vessels of the stomach and duodenum, and in small does speedily to excite the biliary and other secretions. Dr. L. has found it of service, in doses of one sixteenth of a grain, for checking the sickness which calomel produces—and he speaks highly of its use in dyspepsia.

Mercury, is a medicine of great efficacy in inflammatory complaints; but as it is apt to increase feverish symptoms in the first instance, its use ought not to be ventured upon without previous depletion. Its action is stronger upon the extremities, than on the centre of the vascular system. It is equally prejudicial, to venture rashly upon its use in cases of great debility, as in cases of high vascular excitement. In combination with antimony, we can use it in cases of active inflammation with greater advantage, and where there is much pain and irritation, joined to small doses of opium and camphor, it proves an invaluable remedy.

In internal inflammations, it is generally sufficient, that it produce slight fulness of the gums, and a brackish taste in the mouth. In croup, it forms our sheet anchor. It ought to be given, says Dr. L. in full doses, at intervals of one or two hours, till the symptoms give way, when it is immediately to be laid aside, and a little castor oil given with mild nutritive diet. In one case, the most violent which Dr. L. ever saw, the patient, a delicate

boy of four years, took 120 grains in twenty-four hours, with complete success. The only sensible operation of the medicine is to bring away green membranous stools, on the appearance of which the breathing is relieved.

We think the severest test to which Dr. Lucas's hypothesis can be subjected, arises from the effects of cold, heat, and stimulants as remedies in inflammation. He says his theory explains well the effects of these opposite remedies, because it combines the doctrine both of increased and weakened action of vessels; the extreme vessels being weakened; the contiguous, increased. But if this were true, cold, as a sedative, ought never to be applied to the immediate seat of the disease, nor heat, to the parts contiguous; and in all cases, stimulants applied directly to the inflamed part ought to be our chief practice. Now this is hardly true in any one instance; and even where it is so, the utility of the practice is generally problematical. The effects of heat and cold are necessarily obscure, from their acting so much through the medium of our sensations. But apart from this, we think, that, generally speaking, cold applications succeed best applied directly to the inflamed part; warmth and stimulants, when applied in the neighbourhood. Thus, in the sthenic stage of ophthalmia, our applications succeed best when cold, or at most, when of the temperature of the part. An incipient superficial bubo may be arrested by the sedative effects of cold; but an indolent one may be hurried on to suppuration by the stimulus of heat. If a deep-seated gland in the groin is inflamed, cold applications by diminishing the action on the surface, and necessarily increasing it in the deeper seated parts, do harm; but heat, by exciting the cuticular vessels, diminishes, on the principle of derivation, the deeper seated action. In external inflammations about the joints, we apply cold; in the deeper ones, heat. We almost never apply a stimulus directly to inflamed vessels, in the sthenic stage of any complaint; in those instances where it is done, it is under peculiar circumstances; and in some cases of doubtful utility, as in extensive scalds. In the first stages of ophthalmia, no scientific surgeon thinks of overcoming the *weakened* action of the vessels by the application of a stimulus. The treatment is all of the depletory kind, at least in the first instance; when stimulants are applied, it is on the principle of counter-irritation. But when the active stage of the disease has gone over, and an indolent state of the vessels has succeeded, then moderate stimulants are useful. We have, indeed, heard of a celebrated occulist applying solutions of lunar caustic, of the strength of gr. xij. to the ounce of water, in the active stage of the Egyptian ophthalmia; such rash practice is

generally condemned; but even should it succeed, the principle upon which it does so is very plain; a new action nearly as bad as the former is established, and that at great risk to the organ.

It is argued, that sudden and great degrees of cold produce a blister, the same as sudden and great degrees of heat. Granted; but they do so in a very different manner. Great degrees of heat, suddenly excite increased action; great degrees of cold, suddenly exhaust power. Apply cold to a bleeding surface, and you check bleeding; apply heat, and you encourage it; in the former case, you diminish the action of the vessels; in the latter, you increase it. All the phenomena indeed, which the action of these remedies exhibit, are strong proofs, that in the earlier stages of most inflammations, we have increased action of the inflamed part. Inflammation, as we have seen, and as Dr. L. very satisfactorily proves, consists in a loss of balance between the power and action of the affected part and those of the contiguous parts. Heat produces this loss of balance, by exciting increased action of the part; cold, from its exhausting power, diminishes action. The inflammation, therefore, which is produced by excessive degrees of cold demands stimulating applications; and their use, we think, is almost confined to these cases. Indeed, the inflammatory effects of low degrees of temperature are uniformly of an asthenic character; those of heat may be sthenic, although great degrees of it hurry the inflammatory process beyond the stage of increased action, to that of weakened action, and then stimulating applications are required. Of course, we here exclude those kinds of inflammation which are vulgarly said to spring from cold, though in fact they do not depend on the absolute degree of cold, but upon alternations of temperature, or peculiar states of the body. In cases of frost-bite, the very worst thing we can do is to apply heat, because in the first place it cannot be so applied as to act on the weakened part merely, but necessarily increases the action of the contiguous parts, already greater than the affected part can bear; and in the second place, although heat may increase action, it is not so clear, that it augments power; the action of the affected part is already sufficiently strong for its degree of power.

The practice of applying stimulants, such as the turpentine liniment in cases of severe scald, is, we believe, of doubtful utility. The whole subject is one of great interest; and Dr. Lucas's views regarding it merit attention. He is a decided advocate for stimulating applications. Such various and opposite practices succeed, or are said to succeed in scalds and burns, that we very much doubt if tepid water or poultices, be not as good remedies as any. But if we attend to the fact, that

the inflammation may be sthenic or asthenic, according to the degree of its severity, we see some reason why cold water should succeed in one case, and oil of turpentine, in another. The shock to the nervous system may be such, that stimulants are necessary to rouse sensation; and the increase of action may have been so rapid and excessive, that the inflammation depending upon loss of power, almost immediately supervenes: in a word, the hazard of gangrene taking place, is urgent. In such cases, we stimulate both externally and internally. But there are other cases, when the fever produced is purely, in the first instance at least, of an inflammatory type, where we may bleed once or even oftener, and where cold or soothing external applications are the most judicious. Such diversity of appearances depend partly on the degree and mode in which the heat has been applied; partly, upon constitutional peculiarity.

As might be expected from his theory, Dr. L. recommends cold applications to the abdomen in peritonitis, and other internal inflammations; to the scalp, in cerebral inflammations; and even to the chest, in chronic inflammations. Why this distinction in case of the chest? We believe this practice to be irrational and dangerous. Cold, in so far as it excites new sensations, may be applied as Dr. L. directs; but in so far as it diminishes action in the part to which it is immediately applied, and consequently throws more action upon the deeper seated parts, it ought not to be employed. We never saw it used, nor have we ever before heard it recommended, in distinct abdominal inflammations; but we have seen heat used, with decided advantage in such cases. In any inflammation within the chest, no one, we suppose, in his sound senses, will venture to recommend cold simply as such: in phthisical cases, combined with frictions, we have seen it do good, though we never were certain upon what principle; but in these cases it was applied merely in the form of sponging, and used only after a course of tepid sponging. Cold cloths applied and allowed to remain, would, we venture to suppose, be found prejudicial. With regard to cold applications to the head, we think there is some obscurity regarding their action. In headache from fever, there can be no doubt of their efficacy; but we rather think that this headache does not depend upon the same state of the vessels of the brain as in inflammation. So far as the headache is a sensation, and no farther, will the sensation of cold produced externally, relieve that within. If there is distinctly increased action of the vessels within,—a pure phrenitis,—cold might diminish the sensation of pain momentarily, but it would recur with redoubled violence. Even Dr. L. says, that in inflammations at

the base of the brain, they are not advisable. We have often, we think, seen cold applications to the scalp, when the pain distinctly depended upon increased action of the vessels, do considerable harm. We are certainly not disposed to be rash in recommending them. The different causes capable of producing pain in the head are not well known. We think, however, that in inflammation of the internal tunics of the eye, tepid, not cold, applications are of most service;—the reverse, as we have stated, is the case in inflammations of the external tunics.

From what we have said of Dr. Lucas's views regarding the use of medicines in inflammation, our readers will not be surprised to learn, that he praises the use of oil of turpentine in puerperal fever, and peritonitis; turpentine glysters, in inflammation of the smaller intestines (why not of the larger ones also?); and good wine, brandy, and spices, in inflammations of the mucous membrane of the alimentary canal! This last we conceive to be the *ne plus ultra* of stimulation. But we must finish with Dr. Lucas. We should not have entered so much at length into the consideration of his work, had we not been afraid, that the doctrine of debility might recommend itself, from its plausibility, to some who might not have considered the effects that its adoption is likely to produce on practice. Indeed, we were first startled as to the truth of the hypothesis, by considering how inconsistent it is with the most improved modes of treating disease. We cannot at present afford space to enter with Dr. Lucas into the immense field of fever; nor do we conceive this to be any loss to our readers. This part of the book appears to have been hastily written, and is every way inferior to the part which we have been reviewing.

DR. MARSH ON THE TREATMENT OF DIABETES MELLITUS *.

THIS disease, though not of very frequent occurrence, is often so intractable, that the investigation of its treatment is still deserving of the gratitude of the profession. The work of Dr. Rollo did much in establishing the benefit to be derived from a restriction of the patient to ANIMAL DIET; but like most novelties, this practice has lost much of its credit from the

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* Observations on the Treatment of the Diabetes Mellitus. By Henry Marsh, A.B. M.D. &c. &c. Dublin Hospital Reports, Vol. III. 8vo. 1822.

injudicious praise of those who have pursued it. When patients will submit to it, a very large proportion of animal food, and abstinence as much as possible from vegetables, should never be neglected; but those who trust to these measures alone will be frequently disappointed. It is to be recollected also, that a loathing of animal food, which is a strong characteristic of the disease, is an almost insuperable obstacle. OPIUM, in very large doses, is usually ranked highest among the means of cure, but its effects are unfortunately transient, and the symptoms return when the action of the medicine is over. BLOOD-LETTING, as recommended by the late Dr. Watt, is also a valuable remedy, but it ought not, any more than animal food or opium, to be trusted to alone.

Dr. Marsh's attention was drawn to the disease by a well marked case occurring in his practice. He could find no useful information in any writer previous to Willis, who made the discovery of the existence of sugar in diabetic urine. Our author during his investigations remarked:—1. That in many of the cases whose history is recorded, the earliest disturbance in the general health could be distinctly traced to some cause acting upon the SKIN, and producing derangement of its functions; 2d. That *every* case is uniformly accompanied with a peculiarly morbid condition of the skin; and 3d. That none of the remedies employed produce the slightest beneficial effect until the skin begin to relax and perspiration appear on its surface.

It is chiefly, therefore, or altogether to the DIAPHORETIC properties of medicines, as Dr. Marsh thinks, that we are to ascribe the beneficial effects of those remedies which have been recommended in Diabetes. In two CASES, for example, treated by opium * (*Trans. Lond. Coll. Phys. Vol.* IV.), considerable *perspiration* was always followed by relief of the symptoms. Two cases also which were treated with opium, by Darwin, were much relieved on the appearance of profuse perspiration. Emetics, antimonials, and hepatized antimony, have been found useful on a similar principle (see WATT *on Diabetes*, p. 27, &c.). There is also a very instructive CASE related in Dr. Latham's book on Diabetes, of a labourer who was declared incurable by the late Dr. Parsons, clinical lecturer at Oxford. This man, on visiting his fellow-labourers, when at work, began to take part in it for mere amusement. This induced copious perspiration, and he recovered in a surprising manner, but was afterwards lost sight of. Dr. Latham ascribes his cure to the diet of fat bacon and

* In one of these, the dose of opium was increased, so as ultimately to amount to ten grains four times a day.

onions, with little bread, which is the common fare of the peasantry. We wonder much, however, on the same principle, that this did not cure him *ab initio*, as he must have lived on similar fare from the very access of the disease. Dr. Gerard's CASE, given in Dr. Rollo's work, is also very instructive. The first striking symptom was a diminution of perspiration, which ultimately ceased altogether, and the cuticle in consequence became unnaturally dry, harsh, and to all appearance dead and impervious. These symptoms were accompanied with thirst, debility, and saccharine diuresis. No medicine was given, but an attempt was made to restrict him to animal diet, though, as was afterwards discovered, ineffectually, for he devoured in secret, potatoe skins, and every vegetable substance which he could procure. In order to determine whether there was any cutaneous absorption, he was immersed every successive or alternate day in water of a pretty high temperature, sometimes 100°. In ten days from the first immersion, the dead cuticle began to come off, and the urine was less copious and less sweet. The immersion was continued for a month, and he improved in every respect; and in two months after, was discharged from the infirmary cured. The cure is ascribed by the relater to the animal diet, though he confesses it was not persevered in more than the first fourteen days, out of the four months, which he was in the house. Dr. Marsh, on the other hand, ascribes, with some justice, the cure to the hot-bath used in the experiments on absorption.

Dr. Marsh, according to these principles, adopted the DIAPHORETIC treatment in his own practice. The following is an abstract of a CASE, which he has given with great minuteness.—Riddall, aged 20, a shoe-maker, was sallow and emaciated, with the skin continually arid, and apparently glued to the muscles; had great languor and debility, with a sensation of creeping coldness even in a warm room; appetite voracious; pulse 88, full and throbbing; neither cough, nor dyspnœa; thirst unquenchable; mouth clammy; tongue foul; bowels costive; constant desire to make water, which is increased during the night; in twenty-four hours, passed about twenty pounds of urine, of a very limpid appearance, and a very sweet taste, yielding a copious extract like coarse brown sugar. His first illness was caused from being exposed to cold, wet, and hunger in a storm at sea.

The TREATMENT was commenced by slight bleeding, followed by large doses of mercury, internally and externally, but without any perceptible effect, except that he lost ground. His bowels were evacuated with castor oil and tincture of senna. His diet

was chiefly vegetable. The vapour bath was tried four or five times with little effect and laid aside; but was again resorted to with opium added to the water, which, proving almost immediately beneficial, was continued. By persevering in this treatment, and giving occasional purgatives, applying leeches to the epigastrium, prescribing animal food, and making him use much muscular exertion, his urine was reduced to eight pounds in the twenty-four hours, and all his other symptoms were greatly relieved, particularly the continual sensation of chillness. It is worthy of record, that the animal food, when he was restricted to it alone, induced higher feverish symptoms.

Dr. Marsh is of opinion the diaphoretics exhibited internally, will not have so much influence as the warm bath, and particularly exercise, such as hard-walking, riding, dancing, or whatever may produce copious perspiration. The failures in the employment of diaphoretics in the complaint by others, he imputes in a great measure to the neglect of attending to this important distinction. Muscular exertion should be long persevered in by the diabetic patient, even after the disease is subdued; for no complaint is more ready to return.

In another CASE he was induced to prescribe a CATHARTIC, from observing the effect of a temporary diarrhœa in diminishing the quantity of the urine. The following formula was tried:—

℞. Pil. Colocynth. gr. xij.
Ol. Croton. gutt. ij.
M. ft.. pilul. sumatur una tertiâ quaque horâ donec alvus soluta sit.

The patient not liking the "*tertiâ quaque horâ*," took the whole six pills at once, and he was consequently copiously purged, but without nauséa. So long as the medicine operated, his urine was scanty and high coloured.

In the CASE of a young woman, treated by Dr. Cumming, of Whitworth hospital, the restriction to animal food, twice brought on bad feverish symptoms. The disease was caused by distress of mind. Her skin was very dry, and perspiration altogether wanting. She was much benefited by leeches repeatedly applied to the epigastrium, which, as in other diabetic cases, was enlarged and tense*. Her diet was chiefly bread, well-boiled rice,

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* In a diabetic patient dissected by MM. Dupuytren and Thenard "L'estomac était extrêmement volumineux (cinq à six pintes de capacité); les vaisseaux de cet organe trés dilatés, formaient, à la surface interne, un rése autres rouge et plus développé que de coutume. Le duodenum, le commencement de jéjunum, et le cœcum étaint un peu plus rouge et un peu plus épais que dans l'etat naturel."

and a small proportion of animal food, which agreed with her very well. Her thirst was intense. Neither opium nor the vapour bath, had any effect on the functions of the skin. Oil was therefore tried, rubbed over the whole surface of the body, not as recommended by Dr. Rollo, to prevent cutaneous absorption, but to soften and relax the skin. After this unction, she was placed in a warm bath, and the skin was well deterged from the oil by means of soap. This process, three or four times repeated, brought on copious and general perspiration, which was kept up by means of Dover's powder in small, and frequently repeated doses. The bowels were kept regular by the Pilul. Cambog. Comp. Under this treatment she is gaining weight, and is gradually recovering her strength and spirits. It is remarkable, that her hair fell off when the symptoms became serious.

Dr. Marsh mentions a CASE not diabetic, in which the vapour bath appeared to be a powerful agent in diminishing the urinary secretion. The patient laboured under pulmonary disease, the result of frequent and neglected colds He had lived intemperately, and had now intense thirst, for which he drank many quarts of acidulated water in the course of a day. His skin was scaly and dry, and his urine increased to sixteen pounds daily; but it was apparently healthy in appearance, smell, and taste. The vapour bath soon cured him.

The wonderful accounts given in authors of the excess of the egesta above the ingesta are much exaggerated; for it is to be recollected, that all the superfluous excretions pass by the kidneys. Perspiration by the skin is stopped; there is little pulmonary secretion; the fæces are almost dry; the tears and saliva are scarcely secreted; and even ulcers cease to discharge. There is besides a great degree of irritative fever, which interferes with, and prevents the process of nutrition,—a circumstance which shows the value of opium in the disease; though like other remedies, it is not to be trusted to, independent of a regular systematic plan of treatment.

The concluding directions of Dr. Marsh are as follow:—When the disease is recent, and the patient is able to bear it, venæsection, repeated if necessary, will greatly promote the action of other diaphoretic means, such as the tepid bath. When the epigastrium is much affected, with a sensation of fulness, and what the patient describes as a gnawing feel about the stomach, leeches will be found useful. Purgatives should be exhibited, so as to produce at least one copious evacuation every day, but the rash employment of cathartics may be dangerous. The articles of diet which agreed best with Dr. Marsh's patients were, broiled meat, soup, bread, well-boiled rice and

gruel. Fish or potatoes often disagree. Carbonated lime water with milk; wine much diluted, or beef-tea, appeared to agree well. Food should be taken frequently, and in much smaller quantity than the patient craves, as digestion is very imperfect though rapid. To determine to the skin, he recommends the tepid bath once or twice a day, with flannel next to the skin, and active exercise, and as an auxiliary eight or ten grains of the Pulv. Ipecacuan. Compos. or finally a residence in a warm climate, where Dr. Marsh conjectures, on theoretical views, that the disease must be rare. The whole paper we consider to be meritorious, and we have no doubt that it will excite further enquiry among those who have opportunities of observing this unmanageable disease.

Ainslie's Materia Medica of Hindoostan *.

Although it is nearly ten years since this work issued from the Madras press, yet its rarity in this country, together with its great value, induce us, even at this late period, to make some mention of it.

The work is divided into two catalogues, and in the 1st, 2d, and 3d, sections of the first of these, the Materia Medica is contained. It is with this part alone, that we are concerned. In Section the 1st, is included an account of those articles of the British Materia Medica, which are found in Asiatic countries; in Section 2d, Metallic Substances; and in Section 3d, the Medicines of the Tamool Materia Medica, together with some tables of doses, weights, &c. To analyse a work which is a mere alphabetical list of different substances is impossible; we must therefore, for once, unwillingly depart from our usual course, and present our readers with a few extracts selected from different parts of the book, which is the only plan by which we can enable them to form a just conception of the nature of its contents.

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* Materia Medica of Hindoostan, and Artisan's and Agriculturist's Nomenclature; in the English, Tamool, Dukhanie, Hindoostanie, Telingoo, Arabic, Persian, Sanscrit, and Latin Languages. By Whitelaw Ainslie, M.D. Superintending Surgeon of the Madras Establishment. Published by Special Permission of the Government of Madras. Page 301, 1813.

"CAMPHOR is very much in use amongst the native practitioners of India, who prescribe it externally, as we do, in cases of sprains and rheumatism. The Vytians suppose it to possess the power of shortening the cold fit of an intermittent fever, and to be highly useful in the disease they call Kistnah Doshum, which corresponds with our typhus fever. The Arabians place it amongst their mokewyatdil (cardiacs). The greater part of the camphor that is found in the bazars, is not the produce of the laurus camphora, which grows wild in Japan, but is brought to India from Sumatra, where it exudes from a large tree, resembling the bay, and which is indigenous to that island. A great deal of what is called by merchants 'native camphor,' is produced in that part of Borneo which was ceded to us by the Sooloos."

"WATER.—The Hindoos are extremely particular about water, and ascribe many diseases to it, when impure. By the *Padaurtasindaumanic*, 'a medical work by Aghastier, on the qualities of Ingesta,' it would appear, that that celebrated Tamool writer considered the water of wells, or natural springs in the sandy beds of rivers, as the most wholesome; the next best in degree, he informs us, is river water, and then comes that of a fountain at the foot of high-land. The water of brooks or streamlets from a mountain's side, he tells us, is heating to the body, and that of tanks and reservoirs become stagnant, is the worst of all, and apt to produce indigestions, obstructions, and lethargy, and to pre-dispose to fever."

We add an extract or two from the 3d Section:—

"EMETIC NUT.—*Markarung kai*, (Tam.) *Myn. phul.* (Hind.) *Kowsul*, *Jowsul* (Arab.) *Jowzulkie*, (Pers.) *Mangakaia*, (Tel.) Gardenia Dumetorum. Retz.—*Madana*, (Sans.) This is a nut about the size of a small nutmeg, containing numerous, sweetish tasted, strong smelling seeds. The Vytians consider it as amongst their best emetics, and prescribe it, for that purpose (pounded, seeds and all), to the quantity of a pagoda weight. An infusion of the bark of the root is given in bowel complaints."

"*Telini*, (Hind.) Meloe Chicorei.

"Telini is the Hindoostanie name given to a kind of fly, which, in the higher provinces of India, is found to be an excellent substitute for the Spanish fly. It abounds in Bengal, Bahar, and Oude; particularly in the rainy season, during which period, Dr. Fleming tells us, it is seen feeding on the flowers of cucurbitaceous plants. I have not met with it in lower Hindoostan."

Our author thinks the unfavorable state of medical science amongst the Hindoos, arises from its being one of the subjects treated of in their sacred writings. The *Upaveda*, which con-

tains the theory of diseases and their remedies, is said to have been originally delivered to mankind by Brahma, and other deities. Very few copies of this work are extant, indeed, it is stated by Sir W. Jones, that it has been almost entirely lost, during the long lapse of ages; he, however, once met with a curious fragment of it, in which he found an account of the internal structure of the human frame. But the anatomical knowledge of the Hindoos is at present very limited, being founded on little more than the ideas which they may have obtained by inspecting the bodies of brutes, the examination of the dead subject not being now permitted amongst them. The Vytians, being *Sudras*, are not allowed to peruse the sacred writings, which are guarded with religious awe by the *Sastree Brahmins;* but they have free access to many valuable professional tracts, which are commentaries on them, and are said to have been composed by prophets, and holy men of antiquity.

It is not possible, to ascertain the exact period at which the medical works were written, but we are told it was many hundred years since; there are no dates affixed to the manuscripts, and to any questions on the subject, the Brahmins always return unsatisfactory answers. The different Indian nations have their respective medical writers, whose works are in greater or less repute. The most numerous are those of the Hindoos of upper Hindoostan, which are held in high veneration. The medical works of the Telingas, are composed in Sanscrit verse; they present very minute descriptions of the symptoms of diseases, but are greatly deficient in the knowledge of the internal structure and functions of the human body, and their value is diminished by frequent mystical allusions, and by a belief in the powers of magic and enchantment*. The Tamool works are more valuable; the language in which they are written is particularly cultivated and forcible, and the poetry is much admired by those who have made it their study. Aghastier is the principal Tamool writer; and most of the Sanscrit works on medicine are composed by Durmantire. The former enumerates the following causes of fever,—an exposure to the heat of the sun at an early hour of the morning, while fasting; eating voraciously any food of a very hot nature, when the body is weakened by

* The powerful influence of superstition over the native Indians, was strikingly evinced at the first introduction of vaccination amongst them. They at first opposed it most violently; but, by a judicious advantage being taken of their prejudices, were at length induced to become equally eager in favour of its dissemination.

extreme hunger; drinking stagnated water into which withered leaves have fallen; taking a full meal without appetite; neglected constipation.

Dr. Ainslie defends the character of the Hindoo medical men from the illiberal attack of Mons. Sonnerat in his "Voyage to the East Indies." In proof that they are not chargeable with the ignorance which Mons. S. imputes to them, he refers to their various writings, to the Tamool Materia Medica, and also to the testimony of Sir Wm. Jones, who has highly eulogized them, stating that they are generally poets, grammarians, rhetoricians, and moralists, and may be esteemed the most virtuous and amiable of the Hindoos.

We are sorry to observe, that surgery is in a most debased and neglected state amongst the native practitioners, indeed its operations are never performed either by the Tamool or Telingoo doctors, but are left to an inferior class of men. The Mahometan doctors bleed occasionally; they likewise couch for cataract, but in a very clumsy manner.

The articles employed for medical purposes by the Tamools are extremely numerous, perhaps ten times more so than those of any European materia medica; amongst so great a number, of course, there must be many which are trivial or totally inert.

In a paper in the appendix, are contained some details respecting the croton tiglium: these we shall not extract, as we have already given a pretty full account of it in the present volume (pp. 288. &c.).

This work must be highly valuable to those young men who intend practising in India: we regret its scarcity here; but have no doubt but that so useful a book can be easily procured by them on their arrival in Hindoostan.

DR. CHEYNE ON THE DYSENTERY OF IRELAND*.

THIS Tract is by one of our most enlightened physicians, and manifests all that clearness and precision so estimable in scientific authorship. DYSENTERY is a much more frequent disease in the sister island than it usually is in any other part of the kingdom, and it also varies there from the usual descrip-

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* Medical Report of the Whitworth Hospital House of Industry, containing an account of Dysentery as it appeared in the latter end of 1818. By J. Cheyne, M.D. F.R.S. Ed. &c. Dublin Hospital Reports, vol. III. 8vo. Dublin, 1822.

tions which have been drawn up from the symptoms attending the disease in other quarters; so much so, that the great Sydenham terms it the endemic dysentery of Ireland. Dr. Cheyne shows from numerous authorities, that this has been the case for several centuries, and justly concludes that there must be some permanent cause for an effect so invariably recurring. It seems also that it becomes unusually prevalent soon after the prevalence of epidemic fever, probably depending on the same or similar causes. Mr. Pack, surgeon to the Fever Hospital in Kilkenny, states, that the number of patients, convalescent from fever, who were attacked with dysentery, was often such as to oblige the medical officers to appropriate an entire ward of the Fever Hospital for the reception of dysenteries. Mr. Dillon, of the Clonmel Dispensary, reports, that in 1818, dysentery frequently appeared as one of the sequelæ of fever; and also prevailed in those who had not been affected with fever, the mortality being as one to ten. Since that period both Clonmel and Kilkenny have been, comparatively, free from the disease. In Limerick, Dr. Geary remarked, that among the poor, dysentery was more frequently an attendant on the epidemic fever than among the rich. When it supervened during convalescence from fever, it was most severe, being attended with rigors, and sudden and fixed pain in the bowels, which yielded to bleeding and purgatives. It continued to prevail from September till March, which differs very much from its prevalence in Waterford, which was from July to September; the opinion being, that the cold weather put an end to it.

At Cork, we learn from Drs. Pitcairn, Hallaran, and Milner Barry, that it was most prevalent in Autumn and Winter, and that during the last thirty years it has been more frequent in years of scarcity, and when the common articles of food have proved of bad quality. Dysentery frequently occurs as an endemic in Cork, accompanied with a fever peculiar to itself, which has invariably subsided on relief being afforded to the dysenteric symptoms. The writer of this analysis experienced this variety of the complaint in a very severe form when at Cork, about three years ago, and though he gave himself up without the slightest hope of recovery, Dr. M. Barry, brought him round in a few days by simple but active treatment. Dr. M. Barry proved it to be non-contagious, by using, for the dysentric in the hospital, the same glyster pipe which had been employed for the other patients, and none of the latter were ever infected. Dr. Cheyne, however, thinks, and very justly, that dysentery at Cork, as well as in other places, is non-contagious when attended with intermittent; and contagious when attended with continued fever.

It is a fact worthy of notice, that all strangers going to Cork, are at first affected with diarrhœa, which often leads to dysentric symptoms more or less violent, the cause of which may be traced to the low damp situation of the city, or to the water. The river Lee, indeed, whence the inhabitants are chiefly supplied with water, runs over a bed of limestone, but its tributary streams all come from bogs and stagnant lakes, such as that at Blarney Castle. That the water is implicated, is proved by the fact, that dysentery was speedily stopped by the late Mr. Bell, of Cork, who had water for the troops brought from a spring called the Lady's well, while they were prohibited from drinking the water of the river.

Dr. Cheyne himself, studied and analyzed ninety-eight cases of dysentery, which were carefully noted: he found, that thirty-three of them arose during recovery from fever; fifteen, while the fever was in progress; fifteen arose from cold, or cold and wet; four, from indigestion, and the rest were doubtful; but it is observable, that of these many had been exposed to febrile contagion, and that nine of the number had been in close communication with patients labouring under dysentery.

With respect to the discharges from the bowels, the only remark which Dr. Cheyne has to make worthy of attention is, that, notwithstanding very diligent inquiry, it could not be discovered that scybala were passed by any one of the patients, and none were found on dissection. All the other appearances of the stools characteristic of dysentery, were repeatedly witnessed; the stools varied in being of a natural colour, of a drab colour, or of the colour and consistence of flummery; feculent matter mixed with mucus or with clear blood; or blood without any addition; mucus alone, mucus tinged with blood, or mixed with blood, or with purulent matter; purulent matter alone or mixed; a bright green discharge, (produced by calomel and opium,) like the Crow-silk of streams; a loose natural discharge, alternating with bloody, mucous, or purulent stools, when the disease was near a fatal close, and in a few instances shreds of membrane which had sloughed, or portions of coagulable lymph, were observed.

Dysentery was productive of several forms of dropsy,—ascites, and anasarca in particular; and it is worthy of remark, that a swelling occurred in several of the patients, both males and females, resembling the phlegmasia dolens in all respects, but in its connection with parturition. In one or two cases, symptoms of hydrothorax were observed.

On DISSECTION, which occurred only after the disease had run

its course, the mucous membrane of the stomach and small intestines, sometimes presented an inflamed appearance, which in general became more remarkable as we approached to the great intestines; then ulceration began to shew itself, at first superficial, afterwards laying bare the muscular fibres of the intestines; the ulcerations became larger, more numerous and deep as the rectum was approached; but it was remarked, that the last three or four inches of the rectum were sometimes pretty sound. In some instances, the colon was found contracted; in others, it was distended, and always more or less ulcerated. The peritoneum was found less diseased than might have been expected.

In many respects, the dysentery of 1818, was like that of tropical climates, the functions of the liver and skin being disordered from the commencement. In point of severity, there was great difference among the cases; sometimes, the complaint appeared in the form of mucous diarrhœa without much pain or fever; and sometimes, it was attended with all the symptoms of an acute enteric inflammation. The most severe cases in the first, and the most unmanageable throughout, arose in the course of fever: the mildest cases were those which seemed to have the least connection with it. The symptoms, on which chiefly we formed our PROGNOSTIC in the early part of the disease, were the tenderness of the abdomen, the degree of pain, the frequency of the stools, the extent of febrile affection, and particularly the quickness of the pulse. The state of intestinal ulceration, could with difficulty be ascertained in the early stages, though it was more easily known from the stools in the later stages. When emaciation came on, and no relief within twelve or fourteen days, or where a hagard look, with quick pulse and the abdomen impatient of pressure, appeared in the third week, the case was considered hopeless.

Dr. Preston, of Limerick, says, that the diseased appearances which he observed, were very much alike in all. The chief seat of the disease was in the colon, the coats of which were found greatly thickened, with strong marks of inflammation—portions of the gut, in some cases, approached a schirrous state; the passage in this part being much narrowed. Part of the ascending colon generally adhered to the peritoneum, and where the disease had made greatest progress—it felt thickened, and was dark coloured. The rectum was also in general thickened, and its inner coat much destroyed by ulceration. The small intestines were more or less occupied with red vessels, and some parts exhibited a dark livid appearance. In one instance, the omentum was firmly attached to the peritoneum, nearly in its whole

extent, and in some parts, pus had formed between the two membranes. The mesenteric glands in some were greatly enlarged, and converted into a firm cheesy-looking substance. The stomach was always found about half full of dark green fluid, and fully distended with flatus, the coats seemed healthy; the liver was invariably much diseased, in general considerably enlarged, and its whole structure apparently destroyed. In two cases, the surface was studded with large yellowish white spots, which on cutting into them were found to contain pus, and yellow purulent matter was lodged in distinct cells throughout its whole extent. The concave surface commonly presented a livid aspect, and was indúrated. The gall bladder was usually nearly empty.

A harsh, dry, opaque, dirty looking skin; a florid, clean, varnished tongue; vigilance; a hollow eye; and a pallid, wasted, faded cheek; tenesmus after drinking; pains in the knees, and cramps in the legs; fits of dyspnœa; a tendency to œdema and ascites—belong to an advanced stage, but not the last, which was characterised by extreme emaciation, supine posture, involuntary stools, a thin reddish secretion flowing without check, sordes on the teeth; hiccup, tendency to delirium, difficulty of swallowing, and a pulse like a thread.

In detailing the TREATMENT, Dr. Cheyne makes some judicious remarks on regimen. Little benefit can be expected from mere prescription, unless an hospital be suited to the diseases which it contains; unless proper regard be paid to comfort in the supply of the patient's food, to the cleanliness of his person, to the spaciousness of his ward, to the purity of the air which he breathes, and above all to his feelings. When these things are neglected, the consequence is not mercly that recovery is retarded, but that new complications of diseases arise. On these principles the sashes of the windows in the wards of the hospital were closed, while at the same time ventilation was secured by additional apertures, which were made into the chimneys near the ceiling. A cotton bed-gown and a pair of thick worsted stockings were supplied to all the patients, who were also swathed with compresses and flannel rollers. With respect to diet, farinaceous food seemed entitled to a preference, all kinds of nutriment which had either a tendency to quicken the pulse, or to leave much fœcal residuum being prohibited.

It is well remarked by our author, that nothing can be more erroneous than to suppose any one disease to admit of only one mode of treatment, and he only claims for his own method a preference to all that he had seen tried in the same circumstances.

Yet his treatment fluctuated, was weakened by experience, and again corroborated by experience still more extensive. For example, the treatment by means of mercury was not generally found very successful. Calomel and ipecacuan; the blue pill and ipecacuan; doses of five grains of calomel and half a grain of opium, at stated intervals of four or six hours; larger doses of the same medicines, a scruple of calomel and two grains of opium—all often failed when the disease was established, yet Dr. Cheyne has no doubt that the mercurial treatment is entitled to confidence in dysentery of other forms, and even in this one, in the less advanced stages.

The pathology of dysentery which supposes, that the symptoms (such as tenesmus, and the sensation of the intestines being loaded and oppressed) depend upon an accumulation of indurated fœces, requires to be reconsidered, as it appears, that in this as in other cases, one of the effects of the disease has been mistaken for its cause. In many cases accordingly, purgative medicines seemed greatly to increase all the sufferings of the patient; and castor oil, the cathartic to which the preference is usually given, frequently roused the dormant griping pain, so that it appeared not altogether to maintain the character of excellent, to which it has acquired a kind of prescriptive right. Venesection, against which we are so often cautioned by the best writers, was certainly the remedy the least equivocal in its effects, and the most uniformly useful of any which was employed in the Whitworth hospital.

In the first stage, when there was little pain or fever, a purgative was given early in the morning, and about ten grains of the compound powder of ipecacuan early in the afternoon, and again at bed-time; at the same time enjoining low diet. This practice restored him to health, though it is but proper to add, that the disease, as well as the concurrent fever, often ended spontaneously in free perspiration. When the symptoms ran higher, with fever and much tenderness of the abdomen with tormina and tenesmus,—mercurials, venesection, and saline purgatives, with a small proportion of tartarized antimony were useful, along with the tepid bath in the evening, and an opiate rendered diaphoretic at bed-time.

When the stools chiefly consisted of bloody mucus, with tender abdomen,—venesection was never omitted. The blood-drawn was in many such cases cupped and buffed. The blood-letting, sometimes immediately altered the character of the stools, though purgatives had produced no change. Those who object to venesection in this form of dysentery, have surely never witnessed the great relief which profuse spontaneous hæmorrhage from the bowels sometimes has on the disease.

When extensive ulceration was apprehended to have supervened, indicated by agonising pain, unceasing tenesmus, intolerance of the slightest pressure, and great pyrexia,—in the course of a single hour, considerable quantities of blood have been abstracted, two grains of opium, and a scruple of calomel given, with the warm bath, and a swathing of warm flannel. Dr. Cheyne recommends opium to the extent of four or five grains, as it was this which seemed to him to arrest the progress of the inflammation, and whatever procured respite from the agony of the tormina often proved of permanent benefit. After the large dose of calomel and opium, calomel in doses of five grains, with half a grain of opium every third or fourth hour, till ptyalism was induced, proved highly useful. When the ptyalism supervened, the mercury was intermitted, and a mixture of balsam of capivi was given every fourth or sixth hour,—often producing the greatest relief, *(see* PEMBERTON *on the Viscera)*. When the capivi draught lost its effect, the chalk julep, or catechu mixture with laudanum were substituted, with farinaceous diet. It is to be remarked, that when the mercury brought the skin to a natural state, that the disease, for the most part, took a favourable turn. It seems not unreasonable to suppose, in the cases in which the action of mercury was unfavourable, that it affected the biliary organs in the same way as it affected the salivary glands,—stimulating beyond the point of secretion, and thus adding to the patient's distress. In the very advanced stage of the disease, leeches were preferred to the lancet, but the subsequent bleeding from leeches when the debility is great, must be carefully watched or the patient may sink.

Even in the earlier stage of the disease, MERCURY often failed in relieving even those patients whose mouths were affected by it. The gums also sometimes became tumid, florid, and inflamed without salivation. In some instances, the mouth could not be affected at all; and in others the saliva flowed excessively, the tongue became inflamed and swelled, and the worst description of mercurial mouth was produced. In short, it appeared, that the atmosphere of the hospital was a means of not merely maintaining the disease, but of counteracting the salutary effect of our most powerful remedy. Elsewhere, Dr. Cheyne thinks, the mercury might have been advantageous. In the ulcerative and the emaciated stage, mercury appeared to be hurtful.

On the authority of Salle *(De Curandis Morbis*, p. 157.) who recommends in bilious dysenteries "vesicatorium abdomini imponendum, pulpaque tamarindorum, et *cremore tartari*, ad aliquot uncias per diem, alvus solvenda,"—the crystals of TARTAR, very

finely levigated in the dose of half an ounce every fourth or sixth hour, were extensively tried with some benefit, alternating with Dover's powder, capivi, the chalk mixture, and warm and tepid bathing. The gentleman who suggested the remedy, ascribed its action to its antiseptic properties; but Dr. Cheyne thinks it more probable, that it acts by bringing down the bile, in which he thinks it excels most other purgative medicines. Home considers, that, on the same principle, cream of tartar has proved efficacious in dropsy depending on obstructions of the liver.—(Home's *Clinical Experiments*, p. 283.)

Encyclopedia Medica.

Case of Traumatic Tetanus*.

Thomas Minto, a fine healthy boy, æt. 15, on the morning of Wednesday, March 6th, 1822, got entangled in a threshing machine at the time it was in full action. The machine was almost instantly stopped, but not before he was severely wounded. The four smaller toes of the left foot, part of the metatarsal bone of the second smaller toe, and the metatarsal bones of the third and fourth toe of the same foot were shattered, and the left thigh was broken. The right thigh was also broken; the skin and cellular substance torn in pieces from the knee to the pubis; the sartorius muscle was torn in two, and many of the other muscles lacerated. Messrs. M. and C. surgeons, who were first with the patient, removed the shattered bones of the left foot, and dressed the wound, there being nearly as much skin as covered the bones. By this time Dr. H. arrived, when a consultation was held upon the state of the right thigh, and it was determined to amputate it immediately. This was accordingly done by Messrs. M. and C. about two inches below the great trochanter. The bone was completely covered by the muscles, but in some places there was a deficiency of skin and cellular substance. Before proceeding in the operation the femoral artery was tied, and the fractured left thigh bone had been previously set and fastened with pasteboard splints. The

* This case was transmitted to us by the gentleman who had the kindness to furnish our two last Retrospective articles.

boy stood the operation with the most heroic courage: previous to the operation, he had one glass of wine, and after it another. He was put to bed about 12 noon; pulse 120, small but regular. Eight *p. m.* pulse 126; the pain has been very trifling, but he has been a little delirious.

Thursday, March 7. Six *a. m.* pulse 120; had no sleep but was quite easy. Eleven *a. m.* pulse 125; felt pain in the foot and left fractured thigh.

℞. Nitr. Potass. ʒij.
Tart Antim. gr. j.
Syr. Sacch. ʒi.
Aquæ. Lib. ii. M.

A wine glassful to be taken every two hours. Ten *p. m.* skin warm; rather restless; sponged the breast, head, and hands with vinegar.

Friday, March 8. Seven *a. m.* pulse 110. Has had two stools, aided by injection; skin cool; says he feels perfectly well.

℞. Sulph. Magnes. ʒi.

Eleven, *p. m.* pulse 123; in high spirits; Cont. Mixt.

Saturday, March 9. Ten *a. m.* pulse 90. In great spirits; a poultice applied to the foot. Twelve, midnight, pulse 100, hard and irregular; skin dry and hot. Added a grain of tinct. antimon. to the former mixture; gave an injection; bowels to be kept open by occasional doses of sulph. magnesiæ.

Sunday, 10. Nine *a. m.* pulse 100; skin cool; dressed for the first time; femoral artery beating furiously; little discharge from the stump, but it is evident, that some of the saved skin and cellular substance will slough; a considerable fœtor from the foot, which is rather painful. It was dressed with lint and simple ointment, and a large poultice was put over all; he complained little or none of the left thigh, but said it had started a little. Eleven *p. m.* feels comfortable; has had two stools.

Monday, March 11. Ten *a. m.* pulse 126; foot painful; dressed as yesterday; all doing well. Ten *p. m.* pulse 120; skin hot, sponged with vinegar and spirits; room fumigated with tar vapour; foot dressed.

Tuesday, March 12. Eight *a. m.* pulse 100; rather restless in the night, but slept two hours; his mixture has been continued regularly. Eleven *a. m.* pulse 120; dressed; copious discharge from both stump and foot; skin soft; every thing favourable. Eleven *p. m.* pulse 100, feeble; one stool; dressed the foot; cont. mix.

Wednesday, March 13. Ten *a. m.* pulse 95, soft. Wounds

dressed; discharge lessened; granulation luxuriant on the foot. Ten *p. m.* pulse 110. skin dry.

℞ Sulph. magnes. ʒ gr.

Thursday, March 14. Ten *a. m.* pulse 96; skin soft; two stools; dressed; pulsation of femoral artery less; feels wonderfully well; tongue dry. Ten *p. m.* pulse 104; skin hot; sponged; dose of his mixture increased; foot dressed.

Friday, March 15. Eleven *a. m.* pulse 120; irregular; had a tolerable good night; dressed; stump looks remarkably well, though part of the skin and cellular substance is sloughing; little matter from the foot; fractured thigh painful. Ten *p. m.* pulse 125; feels rather uneasy; thinks he has got cold; oppression at his breast; an injection given without effect.

Saturday, March 16. Ten *a.* m. pulse 124; rather hard; complains of having caught cold in the night in his neck and throat, as he was restless, and often threw off the bed clothes; dressed; matter scanty; thigh painful. Ten *p. m.* pulse 130; restless; an opiate administered.

Sunday, March 17. Nine *a. m.* pulse 125; seems to have got a slight sore throat, as he has some difficulty in swallowing, and cannot open his mouth with the same ease as formerly; dressed; wounds look well, only the remaining piece of metacarpal bone is carious. Eleven *p. m.* pulse 135; foot dressed; very uneasy; bowels have been kept open with salts; opiate and sloughing of the stump ceased.

Monday, March 18. Ten *a. m.* pulse 125; wounds dressed; the night was passed pretty tranquilly; but now his eyes sparkle with unusual lustre; his tongue is rather foul; appetite fails; there is stiffness of the muscles about the neck and breast; and the foot begins to start; had just now a sudden spasm which rendered his breathing laborious for a minute; began to rub on his breast the following liniment:

℞ Camphoræ,
Opii āā ʒij
Ol. oliv. ʒj M.

To have one grain of opium every two hours till sleep be induced: the nitro-antimonial mixture to be omitted. Ten *p. m.* feels easier; liniment to be continued during the night.

Tuesday, March 19. Nine *a. m.* pulse 120; little difference, though he has slept little or none; the opiate seems to have raised his spirits, for he repeatedly said during the dressing of his limbs, I have no pain; opium increased to two grains; dressed the foot with lint dipped in a solution of opium, and a poultice; at the suggestion of Mr. C. a drop of prussic acid was

given every two hours. Eleven *p. m.* pulse 130; neck stiff, except when it is rubbed; can eat, but with pain; frequent startings of the foot, and particularly of the fractured thigh; strength of the liniment considerably increased; injections given.

Wednesday, March 20. Ten *a. m.* pulse 128; hard; skin dry; jaw more shut; countenance altered; four injections have been given without effect; gave four ounces of castor oil. Ten *p. m.* pulse 135; no stool from the oil; injections thrown up were obliged to be drawn away artificially, the rectum appearing to be affected with spasm; opium and liniment continued; foot and fractured thigh starting very frequently.

Thursday, March 21. Six *a. m.* slept none; has had three stools; feels easier; has taken his medicine regularly, and been rubbed all night; mouth can be opened a little more; the whole body starts every fourth minute; the foot every second minute; breast and arms continue to be rubbed with liniment, and a cloth covered with half an ounce of opium dissolved laid upon the back and neck; prussic acid discontinued; it seemed to have no effect; bowels rather open. At eleven *a. m.* the wounds were dressed, when the carious bone of the foot was removed; the stump looks paler than formerly. Eleven *p. m.* motion of the jaw easier; but some spasms affect the broken limb, and it is evident that the ends of the fractured femur will be displaced; eye languid; tongue foul; pulse 140; inclined to sleep. Cont. Med.

Friday, March 22. Ten *a. m.* pulse 138; was rubbed during the whole of last night, except an hour and a half, during which he slept; stump and foot dressed as usual, and both look well; spasms have increased in severity; ends of the fractured femur displaced; and every attempt to replace them only increase the violence of the spasms; an injection of tincture of opium given. Ten *p. m.* pulse 135, hard and irregular. Cont. linim. et opium. At twelve *p. m.* he became very restless, when a draught with 160 drops of laudanum was given to him. The poor boy has all along behaved with the most heroic courage.

Saturday March 23. Eleven *a. m.* pulse 140, small; has taken his medicine regularly, eyelids very heavy; spasms violent and frequent, and attended with dreadful pain; for some days he has been able to take little or no food, and soon tired of the wine. Twelve *a. m.* 60 drops of laudanum to be given every half hour. Died at nine *p. m.* sensible to the last. Such is a faithful abstract of this unfortunate case. Every reader is left to make his own comment on it. Mr. M. had the charge of it, and was unremitting in his attention, and was assisted, almost every day,

by Mr. C. and Dr. H.; and latterly by Dr. D. a very eminent retired practitioner; all the mischief evidently was from the left foot. The patient was kept in a large cool apartment. The main temperature of the outer air was 42° of Fahrenheit. March 24, at two *p. m.* the stump and fractured thigh were examined. A soft pulpy substance completely covered the sawed end of the femur; and in this pulp, phosphate of lime was detected. The same sort of substance partly covered the ends of the fractured femur; but in this there was no phosphate of lime. The fracture was nearly in the centre of the femur. The lower part, that is, the part next the knee, had passed underneath the other, towards the tuberosity of the ischium, about three inches; and from the upper portion projected two sharp spiculæ, an inch and a half in length, which at every spasm must have been darted into the cruræus muscle.

Hamilton, August 29, 1822.

Case of Suffocation caused by a Tumour pressing upon the Trachea. By Alexander Pettigrew, Esq. *Licentiate of the Faculty of Physicians and Surgeons, and Lecturer on Anatomy, Physiology, and Medicine, Glasgow.*

On the 3d June, 1822, William Drummond, aged six months, became exceedingly fretful—skin hot and dry—pulse 140 and full—tongue covered with a thick layer of white viscid matter. He had been vaccinated nine days before, and had at this period on one of the arms a genuine vaccine pustule, accompanied with very little inflammation, and almost no swelling or induration.

Conceiving that these symptoms could not possibly be symptomatic of the vaccine pustule, I was led to make further enquiries, which led to the detection of a general fulness under the angle of the right jaw. Deep under the swelled integuments, a hard tumour, apparently the size of a pigeon's egg, could be distinctly felt.

At this period, several leeches were applied over the tumour, and the bowels were freely opened with purgatives. Occasional anodynes were administered to allay excessive irritation, which had entirely deprived him of sleep. This treatment was productive of much relief: the tumour, however, steadily increased in bulk for several days, when warm fomentations and poultices were ordered, and were persevered in till the tenth.

10th. The tumour was now the size of a small orange. The integuments over it were neither discoloured nor otherwise implicated in the subjacent swelling, except in so far as they were mechanically stretched over it. Fluctuation though deeply seated, could be distinctly felt.

An opening was now made into the tumour with a lancet, and upwards of two ounces of purulent matter were discharged: after its evacuation the child slept soundly for three hours.

Our attention was now directed to a small swelling on the opposite side of the neck, seated also immediately under the angle of the jaw.

Leeches and purgatives were had recourse to at first, in the expectation of reducing the swelling; but finding they were productive of no alteration upon it, and that the tumour remained hard and painful to the touch, warm fomentations and poultices were ordered to be applied to it; these were continued till the fourteenth.

14th. Twelve *m.* Much prostration of strength—lying on the back with the eyes shut—on opening the eyelids the pupils were seen contracted to a mere point—pulse 170, and intermitting—respiration was regularly carried on for four or five times in succession, and then was interrupted for several seconds—there was no cough, no roughness, or hissing, or unusual sound whatever in breathing—the tumour at its most elevated point was not raised a quarter of an inch above the level of the surrounding skin; and as it presented itself to the eye, did not measure, at its greatest width across its base, one inch—there was no discolouration in the integuments, except the leech bites—no fluctuation nor even perceptible sloughiness could be felt in any part of the tumour.

Serious apprehension was now entertained, lest the head should become the seat of attack. Camphor dissolved in oleum terebinthinæ was directed to be applied all over the scalp every second hour, and a mixture containing tincture of digitalis and nitrous æther to be administered internally.

Eleven *p. m.* Dying:—at every third or fourth inspiration there was a violent effort made to inspire, as may be observed after a severe fit of hooping cough: the next inspiration was more natural; the third and fourth were short and feeble, and were followed by nearly half a minute of an entire cessation of repiration, when again the struggling was renewed. There was still no wheezing or rattling in breathing. The difficulty of respiration did not seem to arise from gradual exhaustion, as in ordinary cases of death, but from some mechanical interruption to the air in its passage to the lungs.

Notwithstanding this distressful struggling for breath, I was so firmly of opinion it arose from mechanical interruption, that I introduced my finger into the fauces, and down the pharynx, as far as I could reach, in search of the cause, but to no purpose.

In the distressing state of the patient's breathing, there was no time for a deliberate investigation; and the point of the finger was so firmly grasped by the spasmodic contractions of the fauces and pharynx, that a satisfactory examination was set at defiance.

Again and again I examined both sides of the neck, and weighed well the possibility of pressure arising from the tumours. The one on the right side had been of great size, but even when at its greatest, just before it was let out, there was not the slightest difficulty of breathing: how was it possible, now, that the matter was evacuated, and the tumour subsided, that it could have any part in the cause which obstructed the breathing? As for the one on the left, it never seemed to be one fifth the size of the other, and consequently could not be suspected. Besides, both the one end and the other were so situated to one side of the windpipe, that they could not effect direct pressure upon it. In short, the more I reasoned on the possibility of these tumours being in any part the cause of the difficult respiration, the more I was convinced they were not. I was equally at a loss to conceive what else could be the cause. Having no rational theory to direct me in my prescriptions I ceased to prescribe; and in the course of three hours after, my little patient ceased to struggle and to live.

Dissection—fifteen hours after death. The surface presented the purest white I have ever witnessed on a dead body.

A probe was introduced into the wound made with the lancet into the tumour on the right side; its cavity was considerably obliterated; it contained little or no matter.

The skin and cellular substance covering the tumour on the left side were dissected back; they were not perceptibly thinner over the tumour than on the other parts of the neck; they might be about a quarter of an inch thick. The tumour was now perceived to be deeply buried among the muscles of the neck, and bound down by their common fascia: its obtuse and most projecting point presented itself precisely in the upper angle, formed by the crossing of the sterno-mastoid muscle over the common carotid. Even now it was difficult to tell with certainty from the mere feel and appearance of the tumour whether it contained a fluid. It was so firmly braced down by the common fascia, and imbedded among the muscles, that it did not perceptibly yield to pressure from the finger.

An incision was now made with the scalpel into the tumour, and out flowed a stream of purulent matter. The sac contained in all about two ounces and a half of matter, closely resembling that which had been let out from the tumour on the right side. The lips of the incision into the sac were about two lines in thickness. On introducing the finger into the sac a free passage was found into a considerable cavity situated between the cervical vertebræ and œsophagus. This in an instant unraveled the whole mystery. Here was a large collection of matter pressing the gullet against the wind-pipe, and on that very side of the wind-pipe which is least capable of resisting pressure.

The BRAIN was next examined: both it and its membranes exhibited tokens of recent excessive vascular action; the vessels were greatly engorged; and on making a section of the substance of the brain, bloody specks were thickly scattered over the medullary portion. Effusion had taken place between the dura and the pia mater: the ventricles also contained water: in all there were about an ounce and a half. In bringing the tip of the finger softly over a section of the brain several points felt much firmer than the rest, but not so much so as to enable them to be picked out from the surrounding pulpy mass. On the inferior surface of the left middle lobe, one of these indurated portions was removed entire; it was nearly as large as a walnut, and the pia mater which covered it, and dipped into its substance, was thickened, so as to resemble the coats of the large arteries.

REMARKS.—In this case the suffocation can be so satisfactorily traced to pressure on the wind-pipe, that no doubt can remain as to the immediate cause of death; unless, indeed, some conjecture be hazarded as to the effects produced on the respiratory organs by the pressure of the tumour on the parvagum as it passed over the tumour, and was braced down upon it by the common fascia.

In the absence of all other morbid appearances, those within the skull would most likely have been fixed upon as the indisputable cause of death, and all the symptoms antecedent to it; and the impeded respiration would have been concluded to be the usual and necessary consequence of dissolution, or the effect of disease within the brain acting upon the nerves, nobody knows how, which pass to the organs of respiration; and thus the increased action within the skull, and consequent effusion, would have been set down as the cause, when in all probability, it was purely the effect of protracted suffocation, and pressure upon the large vessels of the neck.

I do not calculate on the thickening of the pia mater, or indu-

rated points of the brain as being in any way implicated, either as cause or effect, in the disease which proved fatal to the patient. He was considered to have enjoyed good health till within three weeks of his death; and till the last twenty-four hours of his illness no symptoms, or assemblage of symptoms, shewed themselves which could be considered ominous, much less characteristic, of disease within the skull. The alteration of structure then, in this case, must have been going on long and imperceptibly before the child began to complain, and consequently was not incompatible with the functions of health.

If then it be satisfactorily shewn that the collection of matter in this case was the cause of death, it points out the important necessity, in similar cases, of making a free incision into all tumours of a doubtful kind near the course of the windpipe.

We may be foiled in our attempts to bring relief, by puncturing such tumours: they possibly may contain no matter; but still unless we be assured that they do not, we are not only authorized, but imperiously called upon to put the matter beyond a doubt by laying them open. The pain and risk of such an operation are not for a moment to be compared with the sudden and complete relief such a proceeding is likely to accomplish.

In doubtful cases, let us suppose that the chance of failure in laying open the tumour is equal to the chance of saving the patient. What then? How does the account stand? Simply thus: out of twelve patients we save six from imminent death at the expense of a trivial, but, as the sequel shews, unsuccessful operation on the other six. And how, but by performing the operation on these six, could it be ascertained (till after death, when it could prove of no avail), that the operation would prove unsuccessful in their cases? Of the necessity of a thorough acquaintance with the surgical anatomy of the neck, to those who would lift a cutting instrument upon it, it is unnecessary for those for whom this paper is intended, that I should make any observations; suffice it to say, that in the case under consideration the common carotid, and consequently the parvagum, and internal jugular crossed the tumour within a line or two of the very point into which, in ordinary cases, it would have been judged the most proper to have thrust the lancet. Notwithstanding this critical situation of these important parts, an intelligent surgeon could have opened the tumour with as little risk of injuring them, as he could open a vein at the bend of the arm without wounding the brachial artery.

Had any account similar to this which I now send you been impressed upon my mind, or had fallen in my way before the

death of my little patient, I am firmly persuaded he would be, among many, a living monument of the triumphs of surgery.

Impressed with a belief that the recital of this case may, perhaps, prove as useful and acceptable to some others, as I conceive it would have been lately to myself, I transmit it without farther apology for insertion in your increasingly useful journal, if you judge it worthy of such a place.

I am, Sir, your very obedient servant,

ALEXANDER PETTIGREW, Surgeon.

Glasgow, 1st July, 1822.

Case of Small Pox after Vaccination directly from the Cow. By WILLIAM SMYTH, Esq. *Surgeon of the 45th Regiment now stationed in Ceylon.*

Colombo, January 23d. 1820.

We are now familiar with the occurrence of small pox, or at least an eruptive disorder, much resembling small pox, in those who have been previously vaccinated. When the real small pox occurs, it is known to assume a milder character than it would have done had it not followed vaccination. But it is now an opinion entertained by many intelligent enquirers, that a new eruptive disease altogether, has made its appearance both in Europe and America differing from small pox, in attacking indiscriminately those who had been vaccinated, those who had been inoculated, and those who never had either small pox or vaccine disease; in reiterating its attack on the same individual; in the eruption appearing in successive crops; in being vesicular more than pustular, containing lymph only; in drying in horny scabs; in wanting the peculiar odour of small pox; and in there being no secondary fever. Most of all, however, it differs from small pox, in that previous affection with small pox either by infection or inoculation, is no security from an attack of this new varioloid disease. The following case, though less explicit on many of the disputed points than could have been wished, establishes the fact, that an eruptive disease with the leading characters of small pox and succeeding vaccination, has not been confined to Europe and America.

Daniel Cully, aged 19, a private in the Forty-fifth Regiment, was admitted into the Hospital, on November 9, 1819, with symptoms of fever—rigors, succeeded by warm flushing, wandering pains, headache, debility, listlessness, and full bounding pulse.

Mitatur sanguis e brachio, lbj.
et
℞ Pulv. jalap. gr. xv.
Submur. hydrarg. gr. v.
M. ut ft. bolus, horâ somni sumend.

On the morning of the 13th, an eruption of vesicles made their appearance on the face, neck, chest, and arms. In a few days these became pustular, and much crowded together, but they remained quite distinct without any appearance of confluence. On the 22d, the disease was at its height, and the eruption was

extended to every part of the body. On the cheeks, the pustules were become quite confluent, exhibiting one uniform dark coloured crust. On the 28th and 29th, the incrustations began to fall off.

During the eruptive fever, he had the saline mixture and some other cooling purgative every day; and after its termination, he was supported with tonics, and generous diet. His general strength suffered very severely, and he remains at present in the Hospital, labouring under general debility, with glandular swellings and abscesses on the inferior extremities.

The patient states, that he was, previous to enlisting, a farmer's labourer; and when employed at a dairy in the County of Norfolk, he caught the vaccine disease by infection from the cows, which has left numerous marks on his hands and arms, quite characteristic of the cicatrices succeeding vaccination.

Case of Injury of the Genitals of a Man by the goring of a Bull. Communicated by M. RICHT, *of Berlin.*

A BULL, which had broken loose from his chain, attacked a ploughman, and piercing his scrotum with his horn, tossed him up, and carried him about for some time, and then threw him with great violence against the walls of the stable. On examination, the scrotum was found to be dreadfully lacerated, and the internal skin of the testicles, as well as the septum scroti, entirely laid open and separated, so that both the testicles were wholly uncovered. The horn of the bull had also struck the penis so violently, that a part of the prepuce was turned down over the penis and scrotum. The patient was likewise much gored and bruised in the back and right side of the stomach. Fortunately none of the large blood vessels were injured, and the loss of blood was but trifling.

The first indication was, to endeavour to reunite the wounded parts as soon as possible, to protect the testicles from the irritation of the air. This was effected by cutting away with a scalpel all the lacerated portions of the integument, and after making the edges even, they were brought together and made firm by nature. The whole was then wrapped up with lint soaked in Aqua Saturni. The patient was also ordered to take a solution of Epsom Salts, and to apply fomentations of tepid Aqua Saturni constantly to the parts. This relieved the excrutiating pains, and he passed a good night. The next morning he was very feverish, the stomach was much distended and painful, and the salts had not operated. As an inflammation of the stomach was dreaded, he was copiously blooded from the arm, and several opening enemata and a solution of Glauber's Salts were prescribed.

Several good stools followed from the enemata, and the salts, which removed the distention and pain of stomach. In eight days, the swelling of the scrotum was much diminished, and to appearance the external skin had become sound. There had been altogether very little suppuration, and whatever pus became lodged in the suture was carefully washed out daily. In a few days the suppuration ceased entirely, and by a constant endeavour to approximate the non-united parts, and by the use of the unguentum basilicon, the wounds were healed in about three weeks from the injury, and he returned in health to his labour.

On the Use of Tartar Emetic in Inflammations of the Breast.

In the Revue Médicale Française et Etrangère, there is an account, by Ch. Peschier, of Geneva, of certain cases of inflammation within the chest, successfully treated by means of large doses of tartar emetic. The author says, that, with him, this medicine has superseded entirely the necessity of bleeding and blistering; and that his practice with it has been eminently successful. He pre-

scribes it in doses of from six to twelve or fifteen grains in the twenty-four hours. He dissolves it in a six ounce mixture, of which the patient takes a tablespoonful every second hour, oftener or seldomer, according to circumstances. But he gives other remedies as may be indicated: if the perspirations be too abundant, he adds to his mixture, two drachms of some one of the ethers; if the pain and sleeplessness are very troublesome, he adds one or two drachms of laudanum, the quantity depending on the urgency of the symptoms; and when the inflammation is combined with strong feverish heat of the skin, he prescribes nitre freely. He has never required to exceed the quantity of fifteen grains of the tartar emetic in the day; that quantity being always found sufficient. The cure is equally rapid and easy; complete convalescence taking place, in the majority of cases, before the eighth day; very seldom does the disease run on to the fifteenth. During convalescence, attention to diet, and to preserve an easy state of the bowels, are all that is necessary. After the second or third dose of the medicine, the patient usually has vomiting; after which there is a great remission of all the symptoms, which, however, is not permanent unless the remedy be continued; for if a dose or two of it be intermitted, the patient directly gets worse; but the effects of the remedy are now confined to the skin and bowels; and it appears that its more disagreeable effects, such as distressing nausea and vomiting, are much less marked, when it is prescribed in this free manner, than when in very minute doses. In these large doses it appears to be equally applicable in all the stages of acute and chronic inflammations of the lungs and pleuræ.

Two Cases of Excessive Dilatation of the Stomach, with Dissections and Remarks, by M. ANDREL, *Fils*, M.D.*

In the month of March, 1822, a woman, aged 65, apparently in the last stage of marasmus, was admitted a patient into the Hospital of the Charity. She had been affected from the month of June, 1821, with the usual symptoms of a dyspeptic affection, which had increased daily in severity. When admitted, the size and figure of the stomach, occupying the greater part of the abdominal cavity, could be perfectly ascertained; its lower edge rested upon the pubis; the upper curvature, at the centre was on a level with the umbilicus, from which it ascended towards the right hypochondrium. She felt constant pain in the region of the pylorus, subject to occasional aggravations. After admission she vomited almost incessantly for the space of forty-eight hours, a brownish liquid; the size of the stomach then diminished in some degree. The vomiting took place almost without effort; it rather resembled simple regurgitation, at least at the commencement. Her desire for food was frequent; but a few morsels satiated her, and these caused an insupportable sensation of bitterness in the mouth. She had constant acid eructations. Her tongue was clean, thirst moderate, pulse feeble, stools seldom, and the skin dry, but without heat. She died on the fifteenth day from her admission, preserving her intellectual faculties to the last. On DISSECTION, twenty-two hours after death, the stomach was found filling nearly the entire cavity of the belly; its larger curvature was partly concealed behind the pubis; it rested on the uterus, and stretched obliquely into both the iliac fossæ; from the right it ascended towards the right hypocondrium, where it terminated in the duodenum. The whole of the intestines were concealed by this immense stomach, except a few folds in each lumbar region; its cavity contained a quantity of brownish fluid, resembling that which she had vomited. Its internal surface was perfectly white, and the mucous membrane soft. But there was no mucous membrane for the breadth of four

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* Journal de Physiologie, &c. par F. Magendie, &c. Number for August, 1822.

fingers towards the pylorus, and at the point where it ceased to exist, it formed an irregular whitish eminence. An ulcerated surface now succeeded, with great thickening and hardening of the parts, which, when cut into, shewed no vestige of muscular fibre, but appeared of a pearly white colour. The opening of the pylorus admitted the extremity of the index finger easily. The calibre of the intestinal canal was found contracted, but otherwise there was no morbid change of it.

The opening in the pylorus, when there has been no disease, is found quite shut in the dead subject; and it is found, by experiments on living animals, to be the same in them. The functions of this opening are performed in a manner analagous to those of the sphincter muscles of the bladder and rectum. When digestion is finished in the stomach, the muscular coat contracting, overcomes the resistance of the pylorus, and the chyme is transmitted into the duodenum. But when, as in this case, the pyloric portion of the muscular structure of the stomach becomes changed by disease, contraction does not take place in a perfect manner; the chyme consequently is not transmitted through the pylorus, even though the pyloric opening be much larger than it is in health. It was so in the preceding case. If a small quantity passes, when the stomach is filled, it is rather like the overflowing, which sometimes happens in paralysis of the bladder, than like a perfect transmission of the chyme. The other case of distension, however, seemed to depend on a different cause. The patient had all the symptoms of a schirrous pylorus, or of a chronic gastritis, though it was found that she had neither of these.

A woman, aged 23, an instructress, having been reduced in her circumstances, left the country and came to live in Paris, where she taught incessantly in a little school. She soon became affected with dyspeptic symptoms. In February, 1821, she had a severe and protracted fainting fit, after which she became subject to occasional vomitings. Her health, in December following, began to decline rapidly; she gave up her employment and became a patient in the Hospital of the Charity in February, 1822. She was in the last stage of marasmus; her skin discoloured; she vomited food as well as drink, more or less immediately after swallowing them; she had trifling pain at the scrobiculus cordis; the tongue was natural, respiration free, bowels habitually slow, and the skin dry and without heat. On the 12th of March all the symptoms were aggravated, the pulse had become quick; she died on the 14th.

DISSECTION twenty hours after death. The stomach was so much dilated, that it covered the whole of the abdominal viscera, except a few folds of intestine at each side; its colic edge was as low as the pubis; it was its greater cul de sac, which was more especially enlarged. There was a slight reddish tinge of the internal coat, which was less manifest towards the spleen than elsewhere. The coats, more especially the muscular one, were exceedingly thin and easily torn. The small intestines were much contracted, and the descending colon in a very great degree. The larger intestines, at different points of their mucous coat bore evident marks of inflammation; they were impacted with hardened matter. The liver was somewhat enlarged though otherwise sound.

Some authors have described similar cases with the above, under the title of dropsy of the stomach; and Bonnet relates one where the swelling being mistaken for an ascites, paracentesis was performed, and death followed. In the CASE last detailed, there was no disease of the pylorus, or of the stomach to account for the dilatation. Lieutaud relates a CASE, and ascribes the distention to palsy of the stomach; but in his case the patient had no vomiting; hence he infers, that vomiting is performed by means of the muscular coat of the stomach. M. Andrel supposes that the last case depended upon paralysis of the muscular coat, although there was vomiting. When the stomach is so strongly distended, very slight pressure of the abdominal muscles may cause vomiting. There is a strong analogy between distension of the stomach from paralysis and that of other organs.

The bladder, from the same cause, is often enormously distended. When the pylorus is affected with palsy, the food descends simply by its gravity. In cerebral affections, our strongest drastic purges fail to procure stools, although the inflammation which they cause of the mucous membrane shews, that it is still sensible to their stimulus; the want of motion in the bowels, therefore, obviously depends on want of contraction in the muscular coat. We often, from the same cause, find the intestines distended with fluid matter.

But in the last case, to what are we to ascribe the gradual wasting of the flesh and strength? Was digestion ill performed in the stomach in consequence of defect of the nervous power? Or was chymification performed, but in consequence of only a very small quantity of chyme being transmitted into the intestines, was there a want of sufficient assimilation?

Experiments upon the Roots of the Spinal Nerves, by M. MAGENDIE.

M. MAGENDIE has been following out the path of investigation pointed out by Mr. Charles Bell, of ascertaining the peculiar functions of different nerves, by means of dividing them. Those which he chose for experiment were the anterior and posterior roots of the nerves of the spine. He made many fruitless attempts upon grown animals, but the great injury occasioned by opening the completely ossified vertebræ, proved fatal to the animals before the result of dividing the nerves could be ascertained. Having procured, however, a litter of eight whelps, he set to work anew. In one, he laid bare with ease the posterior half of the spinal marrow, surrounded by its membranes, at the origin of the lumbar and sacral nerves, and raising upon the flat part of a pair of small scissars the posterior roots, he divided those upon one side, without wounding in the least the spinal marrow. He now watched the animal attentively. At first, he thought the corresponding limb to the divided nerves was completely paralytic; it remained quite insensible to the strongest pricking and pinching; but what was his surprise, in a short time, to perceive the limb begin to move in the most apparent manner. Upon a second and third trial, he observed the same circumstances, namely, total loss of sensibility of the limb corresponding to the nerves, the posterior roots of which he divided, while the power of motion continued. He now began to think that perhaps sensibility was communicated by the anterior, as the power of motion seemed to be by the posterior roots. He found great difficulty to reach the anterior roots without injuring the posterior; but by pulling gently at the dura mater covering the spinal marrow, he succeeded in bringing the anterior into view, and dividing them with a very narrow knife. In this case also, he divided the roots of one side only, that he might judge of the effect, by comparing the two limbs. The effects of this division were not long doubtful; the limb became immediately motionless and flaccid, while it continued to manifest the most unequivocal symptoms of sensation. In the next case, he divided at once both the posterior and anterior roots, when absolute loss both of motion and sensation took place. These experiments he has repeated upon many kinds of animals, and always with the same result; so that he thinks he has ascertained, beyond doubt, that the posterior roots of the spinal nerves communicate the powers of motion, while the anterior are in a special manner connected with sensation. He is still prosecuting this most interesting department of physiology, and promises to communicate some new results in the following number of his Journal.—*(Journal de Physiologie, &c.)*

On the Lymphatics.

M. ANDRAL, Assistant to M. Lerminer, of the Hospital of the Charity, Paris, has, for two years back, been in the habit of examining the lymphatics of the abdomen and thorax, in almost all the patients who have died during that time in that hospital. Even in those cases where there was the greatest probability of his find-

ing foreign matters in the lymphatics, he either found them empty or filled with a colourless transparent fluid, like that which is found in serous cavities. In a very small number of cases, the fluid in the thoracic duct was of a slightly reddish tinge, such as is observed in animals that have been long fasting. Mascagni asserts, that he has seen the lymphatic vessels filled with reddish fluid, resembling blood, in those individuals who had died with effusions of blood in the thoracic or abdominal cavities. So far as M. Andral's observation goes, (and he examined great numbers who died of sero-sanguineous effusions,) the contents of the lymphatics were perfectly colourless. Söemmering says, that he has seen calcareous concretions in the lymphatics of individuals who had been affected with caries of the vertebræ. M. Andral dissected with care the lymphatic system of an individul who had been affected with caries of the most of the vertebræ, and also extensive caries of the ribs and arms, and in consequence of which, numerous large abscesses had formed; but in the lymphatics there was neither pus nor osseous matter. In many cases, when the caries was less general, but yet where there was considerable destruction and softening of the bony structure, he was not more successful. He is inclined to doubt, therefore, the correctness of Söemmering's observations on this head. Söemmering also mentions his having found in hydropic patients the glands to be swelled and the lymphatics considerably dilated. M. Andral also doubts the accuracy of this observation. He examined great numbers of patients who died with engorgement of the mesenteric glands, and also with these in a cancerous or tuberculated state, but he never observed the lymphatics to be the least increased in volume. These glands often form enormous diseased masses in the abdomen, without causing ascites. Many authors have affirmed, that they have found bile in the lymphatics of the liver. M. Andral never, even in icterous patients, could detect this. He often found, however, in such patients, the liquid in the thoracic duct to be distinctly yellow, but he does not believe that this depends upon absorption by the lymphatics, because all the other liquids in the economy are of the same colour, and even the fibrous and fibro-cartilaginous tissues. Dupuytren, in dissecting an abscess at the top of the thigh, however, found real pus in the lymphatics of the groin.—(MAGENDIE, *Journal de Physiologie.*)

Experiments on Caloric.

IN a memoir read to the Royal Academy of Sciences of Paris, by M. Pouillet, we have an account of some interesting experiments upon the nature of caloric. He employed thermometers capable of indicating the hundredth part of a degree. The first set of experiments was made on metals reduced to powder, oxides, and other mineral compounds; and the result of these experiments is, that when such substances are brought into contact with liquids capable of moistening and softening them, heat is disengaged. When water is the liquid employed, the rise of temperature is from a fourth to half a degree. Bodies which disengage most heat with one liquid, are those sometimes which disengage least with others. The action of a liquid upon a solid reduced to powder is not different from the action between any two bodies, which, being brought together, adhere more or less strongly; hence M. Pouillet infers, that simple contact may disengage heat, as it exhibits electric phenomena. Similar experiments were made upon various vegetable and animal substances, as woods, fruits, grains, sponge, silk, tendons, different animal membranes., &c. All these substances are known to have the property of absorbing a great quantity of water or other liquids. In all the phenomena of absorption, M. Pouillet observed that heat was disengaged, and in some cases, to a surprising extent; often to six or seven degrees, and sometimes even to ten. In mixing the liquids and solids, and in the phenomena of absorption the combinations were purely mechanical; the disengagement of heat, therefore, is to be attributed solely to the moistening in the one case, and to the absorption in the other: there is no chemical combination in either case. It is to be remarked also,

that any body,—a tendon for example,—disengages as much heat, whether it absorbs water, oil, alcohol, or acetic ether. Salts deprived of their water of crystallization absorb water and disengage heat, but here there is a true combination in definite proportions. On this subject, and on the disengagement of heat, which is observed in numerous cases of solution, M. Pouillet promises soon to communicate some new results.

Case of Sacro-Rectal Hernia.

IN the Report of the Royal Medical Society of Toulouse, there is an account of a singular case of Hernia, by M. Lacoste, which he calls *sacro-rectal*, and of which he says, there is no account in any author. It occurred in a child of a month and a half old, and consisted of a tumour as large as a walnut, on the middle and posterior part of the sacrum, an inch and a half above the anus; it was fluctuating without transparency, and received, an impulse when the child coughed or cried. It was reducible by the taxis, and when this was done the fæces issued by a jet, and with force from the anus. As the opening of the sacrum depended upon incomplete ossification, M. Lacoste attempted the cure by reducing the tumour, and maintaining it in that state until the osseous parts consolidating, the opening was closed, and issue of the gut prevented. If such cases occur, we must beware of confounding them with spina bifida or caries of the vetrebræ.

Case of Evacuation of pure Fat by the Rectum, communicated by Dr. KUNTZMANN *of Berlin*.*

This CASE, which seems to throw some light on the formation of fat, and the functions of the liver, occurred in a baker, in Berlin. He was 35 years of age, of a meagre person, and of regular habits. In the year 1814 he had, from cold a severe rheumatic affection of the limbs. In the spring of 1815, without any apparent cause, he was seized with jaundice. During its continuance, which was of some weeks, the rheumatism departed, but returned again so soon as he got well of the jaundice. He continued in this manner to suffer alternately from these two complaints till November 1818, when Dr. Kuntzmann was first consulted. He found him with every symptom of jaundice which he conceived to have its origin from the rheumatic affection, and prescribed equal parts of the powder of gum guaiac, and of the leaves of senna, two table spoonsful to be taken daily. This mixture, which is highly extolled by Dr. Kuntzmann as a remedy in jaundice, removed and kept away both diseases until May 1820, when there was a slight return of rheumatism.

In October of the same year, he was again called to the patient, and found him having all the indications of hectic fever, by which he was reduced to a state of debility. All these symptoms, in the opinion of the patient, arose from a discharge of slime, as he termed it, from the rectum, which often came away involuntarily, so that his clothes were soaked with it, and smelt very much like rancid fat. On

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* Journal der Practischen Heilkunde. Von HUFELAND. July 1821.

The distinguished Editor of the above Journal remarks, in a note, that this case appears to him to have an important bearing on our imperfect notions of the functions of the liver, and of the share which it has in the generation of fat. He has also met with cases in persons suffering under constipation, in which substances were evacuated, in every respect resembling tallow, and having frequently the shape of the tube of a tobacco pipe.

examining the substance evacuated, Dr. K. found it to have all the apparent qualities of fat, and that, when exposed to cold, it hardened into a yellow mass resembling tallow, or yellow wax. This discharge, the patient had observed after the first attack of jaundice, and since that period, but had not paid much attention to it, only he had remarked, that when the jaundice was at it its height, the discharge ceased. At this time it had continued two months, and occurred once or twice a-day, either alone or mixed with excrementitious matter, of a greyish brown colour. Half an ounce of this fatty substance was given to Mr. Bergmann, apothecary at Berlin, to be analysed.

Water impregnated with it, slightly reddened litmus paper. It dissolved in sulphuric ether, forming a pale yellow fluid, in which a filamentous substance floated. Treated with alcohol, a substance was obtained similar to adipocire. From the same solution of it in alcohol, a yellow oil was obtained, of the consistence of olive oil, which dissolved in alcohol, being again decomposed by the addition of water. This oil is found in every other species of fat. Ten grains of this fat were dissolved in turpentine, without the aid of heat, a fine filamentous substance floating in the solution, which was troubled by the addition of water. It formed a soap with alkalies, which combined in any proportion with water. The other trials made with this substance all proved that it could be nothing else but fat.

The question whence this fat had its origin is important. That it was not fat taken into the stomach, and passing through the bowels undigested, is proved from the dislike which this patient always had to fat meat, so that none was ever cooked for him. The circumstance that the discharge increased so much on the cessation of the periodical attacks of jaundice, and that when the jaundice was at its height it was found to cease, shew, that both had their origin in a diseased state of the liver, and of its functions, and presents a new proof of the influence of the gall in the formation of fat.

By the use of the extracts of taraxacum, of grass, and of chamomile with cascarilla, all symptoms of the hectic fever were removed, so that by the end of January he could attend to his business; but he remained lean and his flesh flabby, and the fatty discharge continued, though not in the same quantity as formerly. It was remarked, that it increased on eating animal food, and diminished with vegetable diet.

[The reader will find references to similar cases in our last Number, page 381.—EDITOR.]

New Researches into the Internal Ear.

M. RIBES* in investigating the internal ear, describes at the anterior and inferior part of the vestibule, a round opening covered by a white, thick, brittle membrane, into which, when a probe is thrust, the instrument descends to near the centre of the fenestra rotunda, so that these two openings seem to be the extremities of a little canal which traverses the base of the internal stair of the concha. In the internal auditory canal, there are three openings; one at the top, which is the internal opening of the aqueduct of Fallopius; a second upon the anterior wall, which is the commencement of a little canal, which runs in the centre of the common newel of the concha; and the third opens upon the posterior wall, and runs to the anterior and inferior part of the vestibule. These two last openings give passage to two of the branches of the nerve of hearing; these branches terminate upon the spiral membrane of the concha, and upon the portion of the membrane which shuts the opening which is in the vestibule. The nerve does not appear to go farther.

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* Journal de Physiologie, par. M. MAGENDIE, &c. Number for August, 1822.

The labyrinth usually contains a particular humour, which sometimes fills it only one half or two thirds; and in individuals who heard perfectly during life, it was found empty of this liquid, there being only enough simply to lubricate the interior of the concha, the vestibule, and the semicircular canals. The aqueducts of the vestibule and of the concha, give passage to vessels to be distributed in their cavities. These vessels are often found gorged with blood in individuals who have died of apoplexy.

Extraordinary Case of Steatomatous Tumours.

M. DAGORN, Physician, at Morlaix, met with a singular case of steatomatous growths, the largest weighing forty-six pounds, upon a young woman aged 18, whose constitution was not in any way remarkable. The largest tumour made its appearance in 1810, and the others appeared successively till 1817. Although very lean and of the middle stature, she weighed 167 pounds. Between the shoulders there were two tumours eight inches long and three broad, uneven, and interspersed with white lines. A third, of a less size, round and soft, was situated on the right arm near to the arm pit. A fourth, sprung from the inferior angle of the shoulder blade, and was fifteen inches long and six broad. The fifth was lower down than the last, and was six inches long and five broad. The sixth, which was larger than a man's head, was situated upon the right hip. The seventh, a very small one, was situated below the trochanter of the same side. The eighth was a prodigious one; it arose from the left hypochondrium, and hung down as low as the middle of the calf of the leg, being two feet long, and three feet and an inch in circumference at its base. All these tumours were of the steatomatous kind, soft, uneven, and having no attachment whatever to the internal organs or the muscles. There seemed to be no constitutional cause for their origin; they appeared to be altogether local in their nature,—disease of the cellular tissue, and the integuments. As the girl had never been benefited by any treatment, and as her strength was declining, M. Dagorn recommended extirpation of the largest. This was done on the 20th of July, 1819, and from the extent of the wound, the twisted suture was employed. The tumour weighed 46 pounds; the integuments covering it were exceedingly thin; the cells of the cellular tissue were greatly enlarged, and filled with serum mixed with yellowish flakes of fat; from the summit to the base of the tumour, the ramifications of an arterial and venous trunk, as well on the surface as in the substance of the mass, were exceedingly manifest. The wound cicatrized at the end of two months and six days; but shortly after, the other tumours, which had for some time been stationary, began to increase prodigiously; which rendered the utility of extirpation doubtful.—(*Revue Medicale Française.*)

Cases of Acephalic Infants.

M. BRESCHET, in M. Magendie's Journal of Physiology, gives an account of two hydrocephalic infants, in whom the cerebrum was wanting. The first occurred at the Foundling Hospital, in an infant apparently ten days old. The child lived two days in the Hospital in an extremely feeble state, with laborious breathing, and occasional convulsions. The form and size of the head were natural; the only thing which led to a suspicion of internal derangement, was, that the sutures were not in the least degree ossified. On opening the arachnoid coat, fifteen ounces of clear serum flowed out. The dura mater was natural, but the arachnoid and pia mater were very vascular. The cerebrum and its anterior prolongations were wanting; but there was seen before the annular protuberance, a small greyish, soft, irregular nipple-like substance, of the extent from right to left, and from before

backwards, of about eight lines. The right lobe of the cerebellum was a half less than the left. The annular protuberance, medulla oblongata, and the spinal chord were not different from the natural state. The anterior swelling of the olfactory nerves was very distinct, from which were seen running backwards, two white filaments, but neither the origin nor insertion of these could be traced. The optic nerves were of the natural size within the orbit, but beyond that, they were preternaturally small; they did not unite as they commonly do; they could be traced to their origins at the nates and testes. The rest of the nerves were found nearly natural.—The other case occurred at the Hospital of the School of Medicine; the head was a little larger than natural; this child lived five days. The cranium was filled with a citrine coloured, slightly viscid fluid; the spinal marrow, cerebellum and pons varoli existed. It differed from the other case, in having the anterior prolongations of the cerebrum, which seemed to terminate before the corpora striata, and bed of the optic nerves.

There can be no doubt, says M. Breschet, that, from these cases, a child born without a cerebrum may live some days; and that the cerebrum is not essential to animal life. He contends, that these cases prove that the olfactory nerves have not their origin from the cerebrum, or the corpora striata, but from some place more remote. It appears too, that ossification of the cranium can take place naturally independant of the brain within.

Experiment on the Effects of Nutritive Enemata. By ROBERT MILNOR, M.D.*

With a view of ascertaining to what extent the intestines are adequate to the assimilation of food, independently of the stomach, I instituted the following experiment. December 1st, 1821, I procured a large cat, and starved him for three days, and now ascertained his weight to be five pounds eight ounces. 5th. Placed him in a large cage, after administering per anum, one gill of beef soup—found he retained it, and in fifteen minutes injected half a pint more. At noon repeated the last injection. 6th. This day the enema was exhibited twice, half a pint each time. 7th. Repeated the enema twice. 8th. It was repeated three times. 9th. Gave the enema twice. 10th. Exhibited this day three half pints of veal soup. 11th. Placed him in the scales, and found his weight to be four pounds and twelve ounces, losing in six days eight ounces in weight. The soup was given during this day twice, half a pint each enema. 12th. It was repeated twice, half a pint each time. 13th. Three half pints were given during the day. 14th. Provided a richer soup, and gave two half pints this day, and placed before him a cup of water, which he drank. 15th. Three half pints were given this day. During his confinement he had few stools, and small in quantity.

Satisfied so far, in the progress of the experiment, that the wonderful powers of nature were exercising their influence in this state of exigency to sustain the vital functions—I placed a muzzle over his mouth of sheep skin, secured around his head, with openings for the eyes and nose, and enlarged his confinement from the cage to the room. 16th. Three half-pints were administered this day. 17th. Three half pints. 18th. Three half pints. 19th. This day he had one half pint of soup, there being no more prepared. 20th. Desirous of confirming the latter part of experiment eleventh, I secured him, laid bare the right jugular vein, and injected into the circulation one ounce of warm cow's milk. After securing the vein, I closed the wound with adhesive plaster and released him, placing him on the floor: there was much prostration of

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* Chapman's Philadelphia Journal, No. VII. (just received).

strength, and uneasiness evinced by his cries. I gave him a gill of water, which he drank, and appeared revived. The usual enema of soup was next administered, and in a few minutes he evacuated a portion of it; he was now placed in a cage with openings at the bottom, in case any should be evacuated it might run off, and his muzzle was removed, it being a source of uneasiness. In three hours afterwards the injection was repeated, and he was watched for one hour, and he retained it. 21st. Two half pints were administered. 22d. One half pint was given. 23d. Two half pints of mutton soup were given. 24th. Three half pints. 25th. Two half pints of chicken soup. 26th. Three half pints. 27th. Three half pints. 28th. About one gill and a half were given. 29th. Nothing given this day. 30th. Two half pints of chicken soup were given. 31st. Placed him in the scales, and found him to weigh three pounds and two ounces, losing in twenty days one pound and ten ounces. The injection was administered twice this day, the usual quantity of half a pint each time. Jan. 1st, 1822. Three half pints of rich soup were given this day. 2d. Three half pints. 3d. Twice the injection was exhibited this day, half a pint each time. 4th. Three times this day, the usual quantity each enema, and gave him some water to drink. 5th. No enema was administered, now weighed him, and found his weight to be three pounds.

Here I closed the experiment, satisfied with the result, and gave my prisoner better fare. Thus was the life of an animal, accustomed to daily food, sustained for one month by alimentary substances injected per anum. It cannot be made apparent, that the stomach in this case exercised any influence upon the articles appropriated to the sustenance of life. The duration of the experiment, which might have been extended, was sufficient to prove that absorption from the intestines may take place without the usual routine of the digestive process. Hence, it may follow, that certain medicinal substances introduced into the stomach, may resist the action of that organ, which would tend to their decomposition, and escape into the inferior portions of the alimentary canal, whence they may be absorbed and carried into the circulation, where they exhibit their effects on the animal economy.

Experiments on the Effects of Deleterious Effluvia.

By J. C. ROUSSEAU, M.D. *

I HAD for a long time suspected, and I soon convinced myself, that when the nostrils are so completely closed as to preclude their participation in the acts of breathing, eating, and drinking, the palate and the whole cavity of the mouth and fauces, far from being, as it was generally believed, the residence of taste, are extremely blunt organs, and possessed of no other faculties than that of being sensible to the mechanical action resulting from the mastication of food; that the most nauseous, the most inodorous, and the most aromatic substances, act all alike upon the unassisted palate. It seemed to me no less clear, that the sentient power of the Schneiderian membrane is in no manner different from that of the other organs, a friction of the emanated particles upon the nervous papillæ, in their passage with the atmospheric air, being indispensable to produce an excitement—the sensation being always proportionate to the rapidity of the column of the air loaded with the odoriferous particles.

Yet it was not evident that the olfactory organ was exclusively affected, and that it could transmit a deleterious influence to remote parts, when no sensible degree of excitement was manifest in it—though such a conclusion might have been drawn from analogy with the highest degree of plausibility. Thus the morbid effect proceeding from the sight of certain objects—from discordant sounds—from

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* Chapman's Philadelphia Journal, No. VII.

the act of tickling and many other disagreeable sensations—the swooning, from the simple prick of a pin, or the mere anticipation of pain—the general relaxation, and, not unfrequently, the death caused by fear, are too generally known not to warrant the conjecture, that certain stimuli applied to the Schneiderian membrane might convey analogous sensations to some of the internal organs.

This, moreover, appeared fully demonstrated in the act of sneezing, from the simple titillation of the internal membrane of the nostrils, or from the application of a number of dusty substances to its surface, when no emanations could be received in the bronchiæ, nor carried to the stomach.

Experiment 1.—A professional gentleman, with whom I had several arguments on the present subject, unwilling to concede that the sensual pleasure derived from eating and drinking resides entirely and exclusively in the olfactory organ, consented to trust his conviction to experiments. He was, for this purpose, blindfolded, and his nostrils were rendered impervious, by compressing them between the fingers. In this state, a small lump of camphor was put in his mouth, and masticated for some time: unable to determine the nature of the substance acting then solely upon his tongue and palate, he declared it to be a piece of crumb of bread with pepper on it.

Experiment 2.—A medical gentleman, still more averse than the former to relinquish his fixed opinion, volunteered himself to perform a similar experiment.

Having previously been blindfolded, and with his nostrils well secured, a small portion of assafœtida was substituted for the camphor used in the preceding experiment, and put in his mouth. He turned and turned it again between his tongue and palate, and exultingly exclaimed that it was camphor.

His mortification cannot be described on finding himself so severely disappointed when he was restored to the exercise of the senses he had momentarily been deprived of.

Several persons of the company tried a number of experiments with different wines, cheese, and many other things, and were convinced of the correctness of the observation.

Experiment 3.—The emanations of several essential oils were inhaled through the mouth exclusively, without communicating sensations capable of giving a knowledge of their particular quality. But as soon as the breath was returned from the lungs, through the open nostrils, the discrimination was made.

Does not this last experiment show that the lungs possess only a feeble power of decomposing emanations remaining for some time in the bronchiæ?

Experiment 4.—Much having been related of the active effects of tobacco applied to the surface of the body, I was induced to try whether the nausea and vomiting produced by such an application are owing to an absorption from the skin, or to the action of the ascending fumes upon the pituitary membranes, or to a mixture of the volatile particles with the blood, through the medium of the pulmonary organs.

I resolved to make a few experiments to ascertain the truth, and at the same time to enable me to assign the real cause with some degree of certainty. A stout Irishman, unapprised of the intention of this experiment, was hired for the purpose. His nose was made impervious with lint, secured by adhesive plasters. A bath of a strong decoction of tobacco having been previously prepared, he was put, and remained in it, up to the navel, for one hour and a half, without evincing the least symptoms of nausea, or any other uneasiness—whereas the bystanders called to witness this experiment laboured under such a degree of nausea as to be put to the necessity of leaving the room, and some of them suffered from severe vomiting.

Experiment 5.—A child upwards of seven years old was plunged up to the neck and remained in a bath of the same kind for two hours, his nose being secured, and suffered so little inconvenience, that he ate cakes during all the time.

Experiment 6.—A lady of a delicate constitution extremely prejudiced against the smell of tobacco, having been repeatedly sickened by the breath of gentlemen

chewing this vegetable, struck by the relation of such singular facts, was induced to try some experiments. She first convinced herself that when her nose was closed, there was nothing nauseous. A quantity of tobacco leaves having been put in a large pan, with a gallon of water, over a chaffing dish, and suffered to boil for some time, she breathed the fumes through her mouth, holding her nose with her fingers, for half an hour, without experiencing the least nausea, or any other disagreeable sensation.

Experiment 7.—A child three years of age, labouring under a violent coryza, which placed him under the necessity of breathing exclusively through his mouth, had a poultice of tobacco leaves applied upon his belly. It was kept all night without producing any apparent derangement.

Experiment 8.—A labouring man, not remarkably abstemious from spirituous liquors, was persuaded to try the next experiment. A quantity of good spirit was poured into a large copper-pan, and kept warm, by means of a chafing dish placed under it. His nose having previously been stopped with lint and adhesive plasters, he was desired to stand over the pan, and breathe the rising steam through his mouth. In this situation he remained above one hour, much deceived in the treat he had anticipated, having experienced no other sensation than a smarting of the throat. I tried, myself, the same experiment, breathing for one hour and an half the fumes of the liquor, and found the same result.

Experiment 9 —The next day, with a view of making a counter experiment, to asertain the truth of intoxication having been effected, as it is reported, by exposure to spirituous emanations, the same individual was desired to repeat a similar process, with open nostrils. He had scarcely remained half an hour over the liquor, when he begged to be excused, declaring that he felt so giddy that he did not think he could stand, and actually staggered in going to a chair.

From the above results, presuming that they hold good in all cases, might we not infer, that the Schneiderian membrane is the vulnerable point, by means of which the baneful influence of contagion is received and transmitted to various parts of the animal system? Maismata must essentially exist under a form susceptible of being carried by the atmosphere, the common vehicle of subtle matter, and therefore unavoidably and constantly come in contact with the internal surface of the nostrils. The stomach, on the contrary, to which they could only be conveyed by a mixture with the saliva, or by absorption through the lungs, can scarcely experience any such influence. In numerous instances too, the effect is so sudden, that it cannot, with plausibility, be referred to any of these latter sources, as we shall have presently occasion to demonstrate.

Artificial formation of Formic Acid, by M. DOBEREINER.*

When cream of tartar, and the peroxide of manganese are mixed with water and subjected to the action of heat, a strong action immediately manifests itself; a great quantity of carbonic acid is disengaged, and at the same time an acid is distilled over, which upon a slight examination, one would take for acetic acid, but which a more strict examination discovers to be formic acid. This acid mixed with concentrated sulphuric acid, is changed into water, and the oxide of carbon; the nitrate of silver or of mercury, changes it, by means of moderate heat, into carbonic acid, and the two oxides are reduced to the metallic state; in fine, with barytes, the oxide of lead and of copper, it forms combinations, which have all the properties of those formed by the formic acid.

The residuum which is left by the cream of tartar, and peroxide of manganese, after their reciprocal action, is a mixture of tartrate and formiate of manganese,

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* Annales de Chimie et de Physique, &c. Number for July, 1822.

which are easily separated as the last is only soluble in water. If in the process sulphuric acid be added, the cream of tartar is changed entirely into carbonic acid, water, and formic acid, and a greater quantity of this last is obtained. The best proportions are 1 part of cream of tartar, 2½ of peroxide of manganese, and 2½ of concentrated sulphuric acid.

It is presumed that in many other processes, for example, in treating sugar alcohol, and other vegetable substances with nitric acid, and perhaps also many plants, the formic acid is one of the products. There can be no doubt, that in many cases, where experimenters have thought that they have detected acetic acid. By means of the relations which are here discovered, between formic acid, and the concentrated sulphuric acid, and the soluble salts of silver and mercury, when dissolved in water and combined with a base, one may distinguish perfectly and easily the formic, from the acetic acid, so that they cannot now be so easily confounded.

MM. CHRESTIEN and NIEL, *on the Medical effects of Preparations of Gold.**

GOLD, says one of the reviewers of this work, "comme toutes les matières précieuses," has lately been introduced into the materia medica. M. Chrestien, of Montpellier, has been the most zealous of its patrons. He prescribes it, and he thinks with great effect in syphilitic affections, both recent and inveterate; as well as in scrophula. Of the preparations which he employs, he has most confidence in the triple muriate of gold and of soda. This, he introduces into the system by friction on the tongue, beginning with the very minute dose of the twelfth or fifteenth of a grain, augmenting the dose by a small fraction as the system will bear it. Great caution is required, for it is apt to prove unmanageable in very irritable constitutions and our author alleges that the want of attention to his cautions in this respect have been the causes of failure in the trials made of it by Baron Percy and others. According to M. Chrestien, the medicine disposes more or less slowly to evacuations, almost always preceded by a slight febrile state, indicated by increased heat, and frequent pulse. Gentle perspiration follows, with an increased flow of urine, of a particular character, and also, though less commonly, a salivation quite inodorous, and without any of the inconveniences of mercurial ptyalism. "Les guerisons," M. Ratier remarks, "que M. Chrestien a obtenues par son médicament ne prouvent rien, puisqu'il est démontré pour tout le monde que des symptômes véneriens primitifs se dissipent souvent d'eux-mêmes, on avec de l'eau pure." On the same principle all remedies may be shown to be useless, provided we grant the fact which M. Ratier says is demonstrated to all the world. M. Ratier adds, "Je contesterai au muriate d'or la propriété *hilariante* que lui accorde le docteur Chrestien. Les individus qui étaient en proie aux inquiétudes, qu'entraîne la maladie ont recouvré leur gaîté, lorsqu'ils ont un leur guerison." So much for French criticism.

Cases of Inverted Uterus successfully treated by Ligature. By CHARLES JOHNSON, M.D.*

Mrs. M. æt. 50, in July 1820, came to the vicinity of Dublin, for the benefit of sea-bathing. From the birth of her first child, fourteen months before, she had been subject to constant mucous discharge from the vagina tinged with blood, and to profuse and frequent recurrence of the catamenia, often, especially after exer-

* Recherches et observations sur les effets des préparations d'or du Doct. Chrestien. Par J. G. Niel, &c. pp. 346, 8vo. Paris.

† Dublin Hospital Reports, vol. III.

tion, amounting to uterine hemorrhage. In consequence of these discharges she was reduced to a state of great debility, which was farther increased by night sweats and diarrhœa: her lips and cheeks were perfectly pale, and she was emaciated in the last degree. There had been considerable difficulty in bringing away the placenta. On examination per vaginam, a tumour was found in the vagina of the size and shape of a pear. Dr. Clarke was called in consultation, and it was agreed that this tumour was polypus uteri, and that the ligature ought to be applied. The ligature when applied produced so much pain that a second examination was made, when it was ascertained that the tumour was the uterus partially inverted. For the patient's safety it was indispensable to do something to check the discharge: the ligature was continued and cautiously tightened, so that at the end of three weeks the tumour came away, and was found to consist of the fundus uteri and fallopian tubes. The patient's health now amended rapidly, and at the end of a year natural menstruation was established.

The other case, that of Mrs. B. Æt. 27, was every way similar; great debility and œdema of the lower extremities had taken place. There was also in this case enlargement of the left ovarium. The ligature was applied on the 19th of November, 1816, and on tightening it on the 20th, retention of urine, and considerable uneasiness were the consequence. Feverishness supervening, the ligature was obliged to be removed entirely for a time, but it was hoped, as the discharge had become putrid, that the vessels had undergone sufficient pressure to prevent the recurrence of hemorrhage. This hope proved fallacious. In three weeks the hemorrhage returned, and the ligature was again applied. January 2. Considerable fever, headache and restlesness, but no pain or tenderness in the belly. She had purgative medicines, and an anodyne at bed time, and on the 3d she was free from the feverishness. On the 12th, the canula came away, and the tumour, which proved to be the fundus uteri, and, fallopian tubes, was found lying in the vagina. In a month she could walk abroad, the discharge had entirely ceased, and she was regaining strength rapidly. The portion of the uterus which was removed in the first case, is preserved in the museum of the College of Surgeons.

It was long thought, that this was a complaint which could admit of palliation only. Dr. Denman says, "All that art can do is to alleviate their sufferings, to moderate symptoms, and sometimes to support the perpending uterus, by means of a flat pessory." M. A. Petit, of the Hotel Dieu, Lyons, mentions a CASE where an eminent surgeon passed a ligature round an inverted uterus of three years duration, thinking it was a polypus, and by that means rescued the woman from the lingering death which threatened her. In all cases in which this treatment has been since adopted, it has proved successful. It is even of consequence to know that the hemorrhage from inverted uterus may be restrained by means of the ligature, a fact ascertained by Dr. Clarke, of Dublin, as early as 1803.

On the Use of Cayenne Pepper in Gonorrhœa, Female Discharges, and Scrophula.

(By a Correspondent.)

THE utility of the cubebs in gonorrhœa is now generally known and admitted; but it is still doubtful whether it acts simply as a tonic, or by some specific effect which it may have over the urinary organs. So far as gonorrhœa and gleet occur in the male, or affect the urethra of the female, there may be some grounds for supposing that the cubebs acts upon the urinary organs, independently of its effect upon the general health. But we find that this remedy is nearly as effectual when the discharge is from the vagina as when it is from the urethra. In such cases its specific effect cannot take place.

We have heard, upon good authority, that Cayenne pepper is quite as successful in the cure of these morbid discharges as the cubebs; and it has this recommenda-

tion, that it is cheaper and much more easily taken. Formed into two-grain pills, it may be tried in all cases; two of the pills to be taken thrice daily, to begin with. The dose requires to be gradually increased, perhaps an additional pill daily, or even more. In the course of three or four days the discharge is usually diminished, though, unless the state of the bowels be very particularly attended to, it is very apt to recur as bad as before. This medicine, in the above doses, acts as a mild and very efficacious tonic, improving the appetite and the general state of the health in a very considerable degree. Whether its effects are purely those of a tonic, or whether it has any specific influence on the urinary organs, is quite as doubtful as whether the cubebs has the same effect. We have heard it recommended also in scrophulous sores, and it is said that it lessens the discharge from these sores. If it does so, we can easily conceive how it acts in gonorrhœa and gleet; and we see no reason why it may not be tried in all sores which discharge profusely. Although we have reason to think rather highly of this remedy, especially as a substitute for the cubebs, we are very much disposed to think that it acts chiefly, if not solely, by its mild tonic qualities. We are not, for the most part, very partial to *substitutes* for good or standard medicines, though it seems to be the *penchant* of some to hunt for nothing else but substitutes for bark, mercury, ipecacuan, &c. each of which substitutes they clamourously laud as infinitely superior to the original medicines. Such we conceive to be the case with Dr. Zollickoffer's proposal to substitute apocynum androsæmifolium for ipecacuan; M. Chrestien's preparations of gold as substitutes for mercury; and the countless number of substitutes for the bark. These observations, however, do not apply to the use of Cayenne pepper, as it is cheaper, much easier taken, and quite as effectual as the cubebs.

Case of Cæsarean Operation, in which the Mother and twin Infants were saved. By M M. HORN, *Father and Son.**

ON the 27th of January, 1821, the Messrs. Horn performed the Cesarean operation on the wife of one Amos, of Fischelbach, and had the satisfaction to save both the mother and twin infants. In consequence of the violent inflammation of the genital organs supervening after a laborious parturition thirteen years before, the superior part of the vagina was found adhering to the os uteri, and firmly cicatrized. Between the labia majora, there was an aperture of not more than an inch in extent, and which, with great difficulty, could allow of the immisio penis. This aperture contracted into a narrow tortuous canal, the dimensions of which could not so easily be taken. Through this, the menstrual discharge came away. After recovering from the operation, the woman lived in her usual state of health for nine months after, and also the twin infants, who had been recommended to a good nurse. The Messrs. Horn attest the narrowness of the vagina, and the perfect adherence of its superior portion to the os uteri. Taking these circumstances into consideration, M. Hufeland is inclined to think that the case furnishes an argument in favour of the theory, which supposes conception to be affected by the aura seminale.

Glasgow Medical School.

[The following complete account of this rising School has been transmitted to us from Glasgow.—EDITOR.]

UNIVERSITY.

Anatomy. Dr. Jeffery. Six Months' Course beginning in November, fee 3*l.* 3*s* *Theory and Practice of Medicine.* Dr. Freer. Six Months' Course beginning in November, fee 3*l.* 3*s.* *Surgery.* Mr. John Burns. Five Months' Course begin

* Hufeland's Journal des Practisch. Heilunde.

ning in November, fee 2*l.* 2*s.* *Midwifery.* Mr. Towers. Six Months' Course beginning in November, fee 2*l.* 2*s.* *Chemistry.* Dr. Thomson. Six Months' Course beginning in November, fee 3*l.* 3*s.* *Materia Medica and Pharmacy.* Dr. Millar, Six Months' Course beginning in November, fee 3*l.* 3*s.* *Botany.* Dr. Hooker. Three Months' Course beginning in May, fee 3*l.* 3*s.* *Natural History.* Dr. Muirhead. Six Month's Course beginning in November, fee 2*l.* 2*s.* *Natural Philosophy.* Dr. Meikleham. Six Months' Course beginning in November, fee 2*l.* 2*s.*

ANDERSONIAN INSTITUTION.

Anatomy and Physiology. Mr. Mackenzie. Three Months' Course, beginning in August, fee 1*l.* 1*s.* *Chemistry.* Dr. Ure. Six Months' Course beginning in November, 2*l.* 2*s.* *Materia Medica and Pharmacy.* Dr. Ure. Six Months' Course beginning in November, fee 1*l.* 1*s.* *Natural Philosophy.* Dr. Ure. Six Months' Course, beginning in November, fee 1*l.* 1*s.*

PRIVATE.

Anatomy. Mr. Mackenzie. Six Months' Course, beginning in November, fee 2*l.* 12*s.* 6*d* *Anatomy.* Mr. Mackenzie. Three Months' Course, beginning in May, fee 1*l.* 11*s.* 6*d.* *Anatomy and Physiology.* Mr. Brown. Four Months' Course, beginning in November, fee 1*l.* 1*s.* *Anatomy and Physiology.* Mr. Hunter. Six Months' Course, beginning in November, fee 1*l.* 11*s.* 6*d.* *Anatomy, Physiology, Medicine, and Medical Jurisprudence.* Mr. Pettigrew. Six Months' Course, beginning in November, fee 1*l.* 1*s.* *Surgery.* Mr. Mackenzie. Six Months Course, beginning in November, fee 1*l.* 1*s.* *Diseases of the Ear.* Mr. Mackenzie. Three Months' Course, beginning in May, fee 1*l.* 1s. *Midwifery.* Mr. Armour. Six Months' Course, beginning in November, fee 1*l.* 1*s.* *Midwifery.* Mr. Armour. Three Months' Course, beginning in May, fee 1*l.* 1*s.* *Botany.* Mr. Rattray *Mineralogy.* Dr. William Cowper.

OCCASIONAL.

Clinial Medicine. The Physicians to the Royal Infirmary. *Clinical Surgery.* The Surgeons to the Royal Infirmary. *Medical Jurisprudence.* Mr. Mackenzie and Mr. Armour. *Midwifery.* Mr. Hosie. *Theory and Practice of Medicine.* Dr. William Thomson.

PUBLIC INSTITUTIONS.

Royal Infirmary, fee for Twelve Months, 3*l.* 3*s.* *Royal Botanic Garden*; *Hunterian Museum.* (Dr. William Hunter's.)

DIPLOMAS.

Degree of Doctor in Medicine; from the University, 30*l.* *Degree of Master in Chirurgery*; from the University, 10*l.* *Surgical Diploma;* from the Faculty of Physicians and Surgeons, 5*l.*

The candidates for the diploma of M.D. must give satsifactory evidence of their having attended three Courses, six months each, of Anatomy and Surgery; two of the Theory and Practice of Physic; two of Chemistry; two of Materia Medica and Pharmacy; one of Midwifery; and one of Botany; (on all of which they must be examined in Latin;) of their having studied Medicine for three years in some University or Universities, or two or more years in London, and one at Glasgow. It is optional to publish a thesis.

Critical Characteristics of New Books.

I.—*An Epitome of Pharmaceutical Chemistry, whereby the art of prescribing scientifically may be facilitated.* By REES PRICE, M.D. 12mo. London, 1822. Price 3s.

WE once heard the following history of a manuscript work of this sort. An apothecary of some ingenuity drew out from the Pharmacopœias, Dispensatories, &c. an abstract for the use of his apprentices, which was so much admired by a certain physician, that he requested to have a copy of it. The copy was obligingly furnished; but the apothecary's surprise may be guessed, when in a few weeks after, one of his young men came in, with the abstract neatly printed, and the name of his friend the physician emblazoned on the title page as its author. We do not insinuate in the remotest manner, that this applies to the epitome before us; we only mention the fact to show, that Dr. Price is not the first person who has published a Manual of Pharmacy, and that the idea at least is not original, whatever the execution may be. Dr. Price's work is as correct, and as useful as the Iliad in a nut-shell can be.

II. *Anatomical and Physiological Commentaries. By* HERBERT MAYO, *Surgeon and Lecturer on Anatomy, No.* I. *August*, 1822. pp. 120. 8vo. [*With eight Lithographic Plates of the Brain, from* Reil.] London, 1822.

THE greater portion of this publication consists of Reil's Essays on the Structure of the Brain, illustrated by copies of the original plates, which have hitherto been little known to English readers. Mr. Mayo has followed his author with enthusiasm and ability, and has made some ingenious remarks on his details The other subjects introduced, are "observations on a vital principle," in which he explains the bearing of his doctrine on Materialism;—experiments illustrating the phenomena of muscular action, whence he concludes that the voluntary muscles are relaxed in a natural state, and contracted only from casual extraneous impression, while on the contrary, the action of the heart results immediately from the structure of "this muscular viscus"*—and experiments to determine the influence of the portio dura of the seventh, and the facial branches of the fifth pair of nerves in opposition to the conclusions of Mr. Charles Bell and Mr. Shaw, and agreeing with our correspondent Mr. Wallace (*see above page* 294) the promised sequel of whose interesting paper, we regret to say, has not yet come to hand.

III. *On the Use of Moxa, as a Therapeutical Agent. By* BARON D. J. LARREY, *&c. Translated from the French, with Notes, and an Introduction, containing a History of the Substance.*† *By* ROBLEY DUNGLISSON, *Fellow of the Royal College of Surgeons, &c. &c.* pp. 76 and 148. 8vo. London, 1822.

IN our last volume, we gave a condensed analysis of the first part of the original work of Baron Larrey, and though we intended then to have continued the article,

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* When will our medical writers abandon these affected *Medical pronouns*, which look, indeed, as if they were afraid to use the language?—IT

† What substance? Cotton or what?

we have been prevented by circumstances from completing our design. This, however, is of less importance, as we are almost certain that the moxa will not readily come into repute in this country, so strong is the prejudice both of patients and surgeons to direct application of fire to the skin. We have seen the actual cautery employed in this country in the case of a hemorrhage, after extirpating a tumour under the orbit; but this was somewhat a matter of necessity, and not like moxa applied as a remedy for an internal disease. We are told, indeed, that the pain is comparatively less than that from a blister, but though this may be so, it would not be so easy to persuade the patient, that a roll of burning cotton applied to the skin, will not be painful. Notwithstanding this, however, we should feel no hesitation in trying it in cases which proved obstinate to blisters and other counter-irritants. We understand, that the moxa is now undergoing a trial in some of our Hospitals, but as yet the results have not been quite so satisfactory as the high praise of continental writers might have led to anticipate.

Mr. Dunglisson has executed his part of the work with zeal and ability. He has gone into a minute research concerning the history of the application, which exhibits considerable erudition, and will be read with some interest. The perusal has left on our minds a very favourable impression of the author, whom we hope soon to meet with again in some more popular line of inquiry than we fear this is likely to prove. Chronic prejudices, he will find, are no less difficult to eradicate than chronic diseases, and we are certain he will find twenty patients who will submit cheerfully to a blister, where he will scarcely find one who will not shrink back from his *burning cotton*, as from a basilisk. Disguising the remedy under the pretty name of *moxa*, may do well enough to tingle the ear of a Frenchman to consent, "but they order things rather differently in England."

IV. *Inquiry respecting Mr. Charles Whitlaw's Practice in Scrophula and Cancer; and the propriety of instituting an Asylum under his care for these complaints.* By A. RENNIE, Surgeon. pp. 38. 8vo. Burgess and Hill, London, 1822. Price 2s.

WE have long been of opinion, that so long as credulity prevails in the world, it is quite a hopeless and Quixotic undertaking to attempt to put down quackery. On this account, we think that the pamphlet before us will have but very small success in its design of opening the eyes of such as have been gulled into the belief of the profound knowledge of scrophula and cancer, possessed by the wild Indians of the American woods, and philanthropically imported into Britain by Mr. Whitlaw, who contrives to persuade his deluded patients that every bruise, scratch, or pimple which they happen to have, is either cancer, scrophula, or something worse, and that he alone can cure them. Our author, for example, gives an instance in which hydrocele was treated by this Indian elève, as a cheesy scrophula, and another in which an inguinal gland, inflamed from a bruise, was treated as a malignant cancer. But we cannot spend time nor space on such a subject; and we would advise the author, who seems to have some quickness of talent, to turn his mind to something more profitable than the gainless task of exposing quackery. The looseness of the style shows that the author is an unpractised writer. In the second part which has been announced, we would advise him, for his own credit to revise with more care, or what would be still better—to burn the MS. and leave Mr. Whitlaw to himself. We see by the public prints, that on the motion of one of Mr. Whitlaw's friends, the sitting of the Asylum committee is adjourned till this day six months. Sic transit gloria! This, we have heard, is due to our author's philanthropic exertions.

V.—*The Life of William Hey, Esq. F.R.S. &c.* By JOHN PEARSON, F.R.S. &c. pp. 355, 8vo. with a portrait of Mr. Hey. London, 1822. Price 18s.

THIS book seems to be very ill arranged. In the first part we have an account of Mr. Hey's professional life, followed by a short appendix, containing a few surgical papers. In the second we have his moral and social life, a record of his "spirit, temper, and conduct, in the several relations of life, through which he passed," commencing with his "early piety," and ending with his "advice to his children; his observations on the management of Sunday and National Schools, and a Speech on the Catholic Question, delivered in the parish church of Leeds." Now we conceive that nothing can be more injudicious in a biographer, than to re-begin his narrative, after he has written about a third of the whole, as this must in the nature of things, present a very disjointed picture to the reader's mind. As a professional book, there seems to be nothing particularly interesting in it; but to those who are piously disposed, it will prove a very agreeable treat; for Mr. Hey seems to have been really sincere in his religious views, which is more than we dare venture to say of many medical men, who loudly profess themselves pious. Nobody who is really religious ever makes a boast of it, or affects canting language.

VI.—*Lectures on the Elements of Botany. Part I. Containing the descriptive anatomy of those organs, on which the growth and preservation of the vegetable depend.* By ANTHONY TOD THOMSON, F.L.S. M.R.C. &c. Vol. I. 8vo. London, 1822. [With Plates.] Price 28s.

MR. THOMSON is already well known in the profession from his Dispensatory, and his useful Conspectus of the Pharmacopœias. We fear that the present work will not add much to his fame, not from the want of ability exhibited in its execution, but from the coldness with which the profession in general look upon botanical studies. It appears to us also that his plan is by far too voluminous to be completed within any reasonable compass of letter-press and of expence calculating from this ponderous volume, price twenty-eight shillings, which only finishes the anatomy of the organs of growth and of preservation. We should imagine, that with Mr. Thomson's powers of condensation, so advantageously exhibited in his Conspectus, he might have given all that was requisite for the mere medical student to know of the Elements of Botany in a single volume at half the expence of this one, which is only the first of—we do not know how many, but if we were to judge from his plan, we should say—four or five.

VII. *Manual of the Practice of Midwifery and the Diseases particularly incident to Women and Children. By* T. PARKINSON, M.D. *&c.* pp. 47. 18mo, London, 1822.

THIS manual exhibits a ludicrous farrago of uncouth terms, such as *symphylakesis* for schirrus,—*sympexis*, for stone in the bladder,—*aparenthikinesis* for chlorosis; *antrokinitis*, for inflammation of the heart, &c. &c. We have no doubt, the author fancied that he was profound in the study of midwifery, when he was turning up his Greek Lexicon for the purpose of constructing this barbarous nomenclature, which, he says will "diffuse a flash of probability" through the whole science!! The directions, so far as they go, seem to be correct; but they are too brief to be of much use to students, and practitioners do not require them.

VIII.—*The Study of Medicine.* By JOHN MASON GOOD, M.D. F.R.S. 4 vols. 8vo. London, 1822. Price L. 3, 4s.

DR. MASON GOOD is much better known as a literary than as a medical writer. He has given an elegant and excellent poetical translation of the great work of Lucretius, *De Natura Rerum*, with very learned and interesting notes. He has translated, in the same masterly style, the book of Job and the Song of Solomon, and enriched his notes with parallel passages from the poets of Persia and Arabia, as well as those of Europe,—with all the languages of which he seems to be familiar. We have repeatedly perused all these works of our author with great pleasure. His only medical production with which we are acquainted is his Nosology, of which, as a work of ingenuity and research, we think highly; but we are rather doubtful of its utility, in a practical point of view. Some parts of it are undoubted improvements on former systems; but his minute divisions are often altogether useless; and above all, his ranking among diseases certain habits and peculiarities of character, seems to us to be much out of place. For example, Mental extravagance, with its varieties, Chivalry, Crack-brained wit, False inspiration, and Fanaticism; or Revery, with its varieties, Absence of mind, Abstraction of mind, and Brown study; or Fatuity, with its varieties, of Stupidity, Forgetfulness, Credulity, and Fickleness. Such are certainly, in a great measure, either secondary or organic affections of the mind; but as they seem not in the least to fall in the way of professional advice, we confess we cannot see the utility of placing them, as Dr. Mason Good has done, in a work on the Study of Medicine. The same strictures which we have applied to his Nosology apply strongly to the work before us, which contains, indeed, a great deal of erudite and ingenious research, but it is much more fitted for the perusal of a literary than of a practical physician. For the author's sake, whom we highly admire as a scholar, we are sorry this is the case; but we must speak the truth, even of those whom we admire. We are rather surprised also that so accomplished and indefatigable a scholar as Dr. Good should have overlooked so many of the more recent continental works connected with his subject. We do not observe the names of Frank, Reil, Beer, Hildenbrand, Grappengeiser, Lænnec, &c., nor any allusion to their researches. We cannot, however, speak positively, as we have as yet only dipped into parts of the book. On the diseases of the eye, we found the work very defective indeed, as it must necessarily be when all the labours of Beer seem to be passed over in silence. Upon the whole, however, the work contains a great body of excellent medical information, and we have no doubt that it will take a high rank as a standard book of reference.

IX.—*The Seats and Causes of Diseases investigated by Anatomy; containing a great variety of Dissections, and accompanied with Remarks.* By JOHN BAPTIST MORGAGNI. Abridged and elucidated with copious Notes. By WILLIAM COOKE, M.R.C. 2 vols. 8vo. London, 1822.

WE confess that the sight of the venerable Morgagni's work, in the dapper form of two neat octavos, gave us somewhat of a similar feeling to what we should have experienced had the great Italian himself stepped in upon us in the costume of a Bond-street lounger. We dislike all abridgments of standard works, and all short cuts to learning, which only deceive their readers into the belief that they are acquiring knowledge when they are only faring on the crumbs which fall from the tables of the great. Such, however, is at present the fashion, and we pretend not to have the power to check its force. Those of our readers who would feel averse to the labour of perusing originals, though they have little chance, we think, of rising high in the profession, may continue to glide through life in a state of blessed mediocrity, by picking up the scraps of abridgers. These strictures, however, apply less to Mr. Cooke's work than to other professed aabridgments. His notes are able and meritorious, and many of his cases are interesting.

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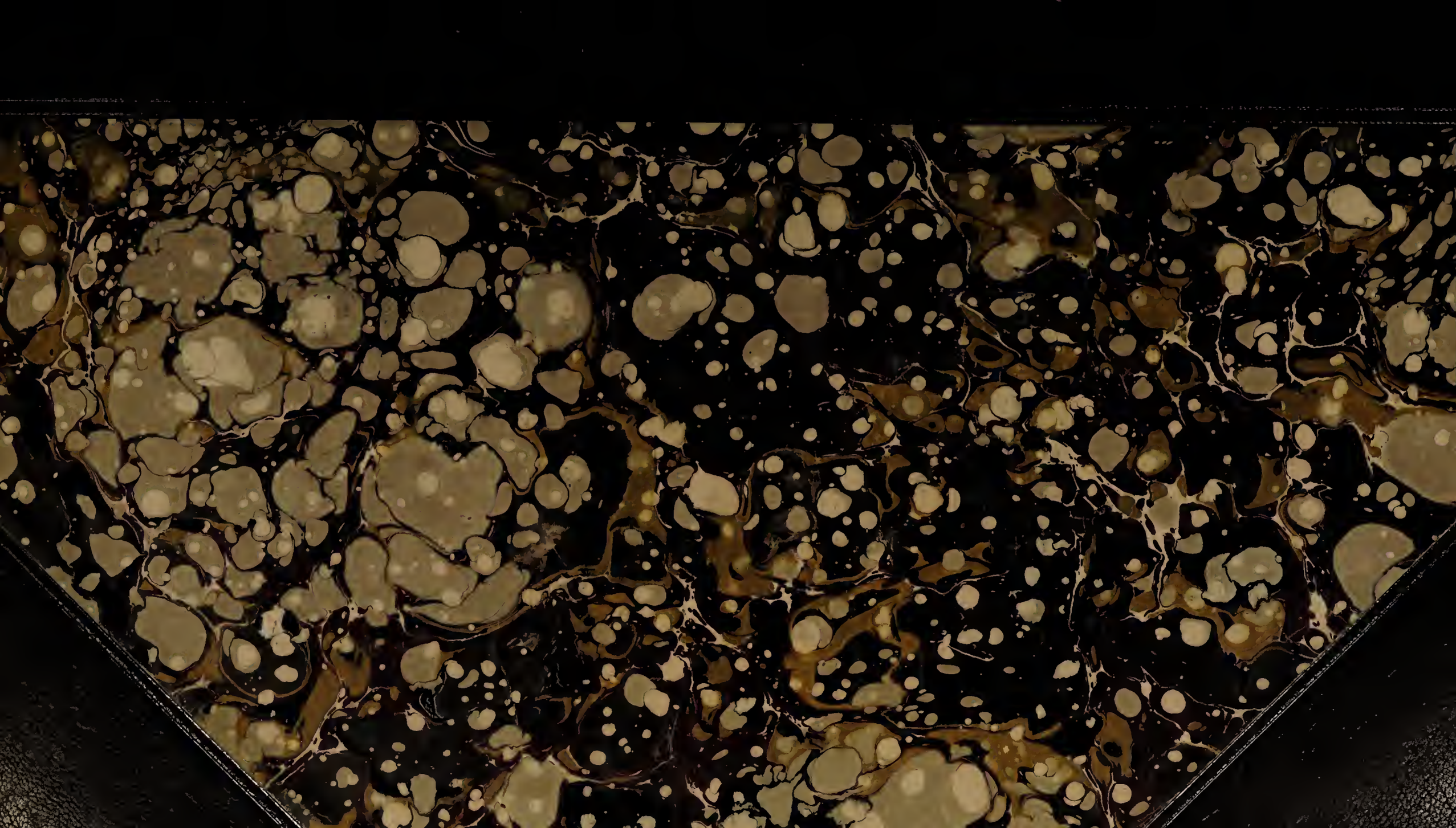
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